



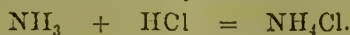
THE CHEMISTRY OF THE PHARMACOPŒIA ACCORDING TO MODERN THEORIES.

BY JOHN CARGILL BROUGH.

V.

WE have seen that hydrobromic and hydriodic acids, and the various metallic chlorides, bromides, and iodides are binary compounds, comparable to hydrochloric acid or chloride of hydrogen. With these are associated bodies of a more complex character in which certain groups of elements called *compound radicles* represent simple constituents. A few of these regular members of the chloride family are pharmaceutic compounds, and must now be examined.

AMMONIAC CHLORIDE, NH_4Cl . (Chloride of ammonium, hydrochlorate of ammonia; *Ammoniae hydrochloras*, B. P.) This compound, familiarly known as "sal-ammoniac," is generally classed with the metallic chlorides. It is formed as a white crystalline powder by the direct combination of equal volumes of dry ammonia and hydrochloric acid gases, thus:



This reaction differs essentially from that which takes place between a metal and hydrochloric acid. For example, when chloride of potassium is formed by the action of potassium on hydrochloric acid, hydrogen is eliminated, thus:

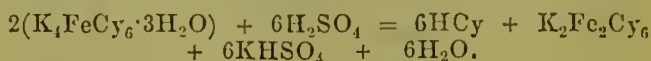


Metallic salts in general are derived from acids by the substitution of metal for hydrogen, but ammoniacal salts are produced by the combination of ammonia with acids, without elimination of hydrogen. The formulæ by which ammoniacal salts are usually represented are framed in accordance with the theory that they contain a compound metal, *ammonium*, H_4 , equivalent to potassium. In ammoniac chloride, for instance, the quasi-metal NH_4 , formed by the union of ammonia and the hydrogen of the hydrochloric acid, is supposed to play the same part that potassium plays in chloride of potassium. The hypothetical metal has never been isolated, but an amalgam of mercury and ammonium, comparable to potassium-amalgam, has long been known. The production of ammonium-amalgam proves that the radicle ammonium is not a mere figment of chemists, but an actual compound, having the nature of a metal. Though ammoniacal salts are usually regarded as salts of *ammonium*, associated with the salts of the alkali metals, they may be considered as compounds of *ammonia* and acids. Thus, sal-ammoniac may be looked upon as chloride of ammonium, H_4Cl , or as hydrochlorate of ammonia, $\text{NH}_3\cdot\text{HCl}$. In the British Pharmacopœia this compound is named in accordance with the latter view, but is inconsistently represented by the formula NH_4Cl .

HYDROCHLORATE OF MORPHINE, $\text{C}_{17}\text{H}_{19}\text{NO}_3\cdot\text{HCl}$. Crystallised $\text{C}_{17}\text{H}_{19}\text{NO}_3\cdot\text{HCl}\cdot 3\text{H}_2\text{O}$. (*Morphiæ hydrochloras*, H_{19}NO_6 , $\text{HCl} + 6\text{HO}$, B. P.) Morphine, $\text{C}_{17}\text{H}_{19}\text{NO}_3$, is a stable alkaloid related to ammonia NH_3 . It combines directly with hydrochloric acid to form a hydrochlorate analogous to sal-ammoniac. By associating the atom of hydrogen from the acid with the nineteen atoms of hydrogen of the alkaloid, this salt may be represented as the chloride of a compound radicle like ammonium. But it is found more convenient in practice to represent it as a hydrochlorate. Cyanogen, CN , is a compound chlorous radicle, equivalent to chlorine, bromine, or iodine. It exists, or may be supposed to exist, in a great number of compounds, and may be obtained in a free state as a colourless gas, having a pungent odour like that of prussic acid. It is usually represented by the symbol Cy , as though it were an elementary body. The most important cyanogen-compound is

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HYDROCYANIC ACID, HCy or HCN . (Hydric cyanide, cyanhydric acid, prussic acid; *Acidum hydrocyanicum*, HC_2N , B. P.) An aqueous solution of this compound forms the *acidum hydrocyanicum dilutum* of the Pharmacopœia. The anhydrous acid, which is a colourless liquid at ordinary temperatures, may be looked upon as a derivative of hydrochloric acid, with the compound radicle cyanogen in the place of chlorine. It is related to the metallic cyanides as hydrochloric acid is to the metallic chlorides. The hydrocyanic acid of the Pharmacopœia is prepared by distilling a solution of ferrocyanide of potassium with dilute sulphuric acid. The ferrocyanide, which contains potassium, iron, cyanogen, and water in the proportions expressed by the formula $\text{K}_4\text{FeCy}_6\cdot 3\text{H}_2\text{O}$ is decomposed, when heated with the sulphuric acid, in such a manner that half the cyanogen passes over with hydrogen in the form of hydrocyanic acid. The reaction is represented by the following equation:—



The secondary products are a yellowish-white powder, $\text{K}_2\text{Fe}_2\text{Cy}_6$, the soluble salt called hydropotassic sulphate, and water.

POTASSIC FERROCYNIDE, K_4FeCy_6 . Crystallised $\text{K}_4\text{FeCy}_6\cdot 3\text{H}_2\text{O}$. (Ferrocyanide of potassium, yellow prussiate of potash; $\text{K}_2\text{FeCy}_3 + 3\text{HO}$, B. P.) This salt, which is mentioned in the Appendix as an article employed in the preparation of medicines, may be supposed to be derived from six molecules of hydrocyanic acid, or H_6Cy_6 , by the substitution of four univalent atoms of potassium, and one bivalent atom of iron, Fe'' , for the six atoms of hydrogen. It may be looked upon as a compound of cyanide of potassium and *ferrous* cyanide; for $\text{K}_4\text{Fe}''\text{Cy}_6 = 4\text{KCy}\cdot\text{Fe}''\text{Cy}_2$.

POTASSIC FERRIDCYANIDE, K_3FeCy_6 . (Ferridcyanide of potassium, red prussiate of potash; $\text{K}_3\text{Fe}_2\text{Cy}_6$, B. P.) This salt is one of the test articles of the Pharmacopœia. Its formula differs from that of the ferrocyanide only by one atom of potassium. The difference between the two salts seems to depend on the alterable quantivalence of iron. In the ferrocyanide the atom of iron is bivalent, Fe'' , and, therefore, engages two atoms of univalent cyanogen, but in the ferridcyanide it is trivalent, Fe''' , and engages three atoms of the radicle. The red salt may be regarded as compound of cyanide of potassium and *ferric* cyanide, for $\text{K}_3\text{Fe}'''\text{Cy}_6 = 3\text{KCy}\cdot\text{Fe}'''\text{Cy}_3$.

Having now got to the end of the list of pharmaceutic compounds, comparable to chloride of hydrogen or hydrochloric acid, I must again direct the reader's attention to the constitution of oxide of hydrogen or water, a compound typical of the basylous oxides and hydrates, the sulphides, the oxygen-acids and salts, and the alcohols and ethers.

WATER or HYDRIC OXIDE, H_2O . (Protoxide of hydrogen; *Aqua*, HO , B. P.) I have already stated that when two volumes of hydrogen, and one volume of oxygen, are mixed and exploded, the product is water, corresponding to two volumes of steam. Now the relative volume-weights of hydrogen and oxygen are expressed by the numbers 1 and 16; hence the composition of water by weight, and by volume may be represented thus:



In the Pharmacopœia the molecule of water is represented by the formula HO , in accordance with the supposition that the atom of oxygen is only 8 times as heavy as the atom of hydrogen. But there are many reasons for supposing that the hydrogen in the molecule of water is divisible while the oxygen is indivisible, in other words, that two atoms of the former element are united to one atom of the latter. This composition is represented by the modern formula H_2O or H_2O , according to which the atomic weights of oxygen and hydrogen correspond to their specific gravities or volume weights. The compounds comparable to water may be formed on the type of the single molecule H_2O , or on the multiple types H_4O_2 , H_6O_3 , H_8O_4 , representing, respectively, two, three, and four molecules.

BASYLOUS OXIDES AND HYDRATES.

These compounds are derived from water by the substitution of basyloous metals for hydrogen. When the hydrogen in the type is only partly replaced by metal, the resulting compound is a *hydrate*; when it is wholly replaced, the resulting compound is an *anhydrous oxide*. Thus, by the substitution of potassium for hydrogen in H_2O , we get hydrate of potassium, KHO , and oxide of potassium, K_2O . The modern formulæ of the normal oxides and hydrates mentioned in the Pharmacopœia are given in the following table. The formulæ of the corresponding chlorides are also given to show the relations of bodies belonging to different types:—

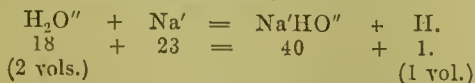
	Oxide.	Hydrate.	Chlorido.
Hydric	H_2O	—	HCl
Sodic	—	NaHO	NaCl
Potassic	—	KHO	KCl
Argentie	Ag_2O	—	AgCl
Mercuric	HgO	—	HgCl_2
Magnesian	MgO	—	MgCl_2
Zinc	ZnO	—	ZnCl_2
Calcic	CaO	CaH_2O_2	CaCl_2
Plumbic	PbO	—	PbCl_2
Ferrous	FeO	—	FeCl_2
Ferric	Fe_2O_3	FeH_3O_3	FeCl_3
Antimonious	Sb_2O_3	—	SbCl_3

On comparing the formulæ of the oxides and chlorides, the reader will observe that the quantivalence or atom-fixing power of oxygen ($\text{O}''=16$) is twice as great as that of chlorine.

SODIC HYDRATE, NaHO . (Hydrate of sodium; *Soda caustica, hydrate of soda, NaO, HO*, B.P.) According to the old system of notation, in which $\text{O}'=8$, this body is represented as a compound of anhydrous soda NaO , and water HO ; but according to the modern system, in which $\text{O}''=16$, it is represented as an intermediate body, from which neither soda nor water can be deduced:

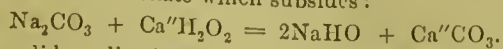
HHO Water.
 NaHO Hydrate of sodium.
 NaNaO Anhydrous soda.

The fact that hydrate of sodium cannot be decomposed by the action of heat is in harmony with the modern view, but hardly consistent with the supposition that the body contains a complete molecule of soda and a complete molecule of water. Hydrate of sodium can be formed by the direct action of metallic sodium on water, thus:



The above equations may be profitably compared with those representing the action of sodium on hydrochloric acid (see page 65). From 2 vols. of gaseous water, or from 2 vols. of gaseous hydrochloric acid, 1 vol. of hydrogen is liberated by a definite proportion of sodium; but the compound derived from the water contains hydrogen equal to 1 vol., whereas that derived from the acid contains no hydrogen. It is evident, therefore, that the quantity of water corresponding to one proportion of hydrate of sodium must contain two separable units of hydrogen, while the quantity of hydrochloric acid corresponding to one proportion of chloride of sodium contains only one unit of hydrogen. The relations of the bodies named are clearly shown by the formulæ H_2O , NaHO , HCl , NaCl , but are concealed when water and hydrate of sodium are represented by the antiquated formulæ HO and NaO, HO .

In the Pharmacopœia process for *Liquor soda* hydrate of sodium is obtained in solution by adding calcic hydrate (slaked lime) to a boiling solution of sodic carbonate. By the interchange of metals the calcic hydrate is converted into sodic hydrate, while the sodic carbonate is converted into insoluble calcic carbonate which subsides:

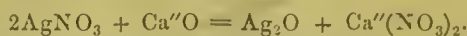


The solid sodic hydrate of the Pharmacopœia (*Soda caustica*) is prepared by boiling down the aqueous solution.

POTASSIC HYDRATE, KHO (Hydrate of potassium; *Potassa caustica, hydrate of potash, KO, HO*, B.P.) This important

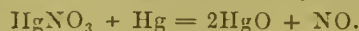
compound stands between water, H_2O , and anhydrous oxide of potassium, K_2O , for it contains half the hydrogen of the one and half the potassium of the other. It differs from sodic hydrate merely in containing a different univalent metal. It is prepared in solution (*Liquor potassa*) by the reaction of calcic hydrate $\text{Ca}''\text{H}_2\text{O}_2$ and potassic carbonate K_2CO_3 ; and by boiling down this solution it is obtained as a solid (*Potassa caustica*).

ARGENTIC OXIDE, Ag_2O (Oxide of silver; *Argenti oxidum, AgO*, B.P.) Silver ($\text{Ag}'=108$) is univalent like sodium and potassium, and consequently two atoms are required to take the place of the two hydrogen atoms in the typical molecule $\text{H}_2\text{O}''$. It is prepared according to the directions of the Pharmacopœia by the double decomposition of argentic nitrate and calcic oxide (lime), both being dissolved in water:



The oxide of silver is precipitated, while the second product of the reaction, nitrate of calcium, remains in solution.

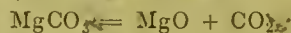
MERCURIC OXIDE, HgO (Red oxide of mercury; *Hydrargyri oxidum rubrum, HgO*, B.P.) In this compound one bivalent metallic atom ($\text{Hg}''=200$) represents the two univalent atoms of silver in argentic oxide, or the two hydrogen atoms in water. Mercuric oxide is prepared by exposing mercuric or mercurous nitrate to a high temperature until nitrous fumes cease to be evolved. In the Pharmacopœia process the crude mercurous nitrate (obtained by dissolving mercury in diluted nitric acid and evaporating the solution to dryness) is heated with fresh mercury to save nitric acid. The reaction may be thus represented:



The two atoms of mercury are oxidised, and a molecule of nitric oxide is set free.

Mercuric oxide corresponds to mercuric chloride or corrosive sublimate HgCl_2 , for the single atom of oxygen is equivalent to two atoms of chlorine. There is a second oxide, called **MERCUROUS OXIDE**, corresponding to mercurous chloride or calomel HgCl . It is represented by the formula Hg_2O .

MAGNESIC OXIDE, MgO (Magnesia; *Magnesia, MgO*, B.P.) This is the only known oxide of the bivalent metal magnesium ($\text{Mg}''=24$). It is produced when magnesium burns in the air or in oxygen gas, and remains when carbonate or nitrate of magnesium is ignited. The decomposition of the pure carbonate may be thus represented:



The pharmacæutic carbonate contains water, which is expelled with the carbonic anhydride by the action of heat.

ZINC OXIDE, ZnO (Oxide of zinc; *Zinci oxidum, ZnO*, B.P.) This oxide, which resembles magnesia in constitution, is also prepared by the ignition of the carbonate.

CALCIC OXIDE, CaO (Oxide of calcium, lime; *Calx, CaO*, B.P.) This well-known body is another example of the combination of two bivalent atoms.

CALCIC HYDRATE, CaH_2O_2 (Hydrate of calcium, slaked lime; *Calcis hydras, B.P.*) This compound is formed on the type of the double molecule of water H_2O , the single bivalent atom Ca'' representing two of the hydrogen atoms. Its molecule contains the elements required to form separate molecules of lime and water, for $\text{Ca}''\text{H}_2\text{O}_2 = \text{Ca}''\text{O} + \text{H}_2\text{O}$, whereas a molecule of sodic or potassic hydrate does not include H_2O . Calcic hydrate at a full red heat splits up into water and quicklime, but an alkaline hydrate cannot be decomposed by heat alone.

PLUMBIC OXIDE, PbO (Oxide of lead; *Lithargyrum PbO*, B.P.) In "litharge" the bivalent metal lead ($\text{Pb}''=207$) is combined with bivalent oxygen, atom to atom.

FERROUS OXIDE, FeO (*Protoxide of iron, FeO*, B.P.) This oxide corresponds to ferrous chloride FeCl_2 . It is mentioned in the Pharmacopœia as one of the constituents of magnetic oxide of iron. It is not easily obtained in the pure state.

FERRIC OXIDE, Fe_2O_3 (*Ferri peroxidum, Fe}_2\text{O}_3*, B.P.) This oxide corresponds to ferric chloride FeCl_3 . It may be

* In the Pharmacopœia the formula HgO represents a molecule weighing 108, but according to the atomic weights of modern chemistry the molecular weight of mercuric oxide is 216. Hence our HgO corresponds to Hg_2O with the old atomic weights.

regarded as a derivative of three molecules of water or H_2O , with 2 atoms of trivalent iron in the place of the 6 hydrogen atoms. The Pharmacopœia oxide is not anhydrous, but is said to have the composition expressed by the formula $\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$. It is prepared by heating ferric hydrate.

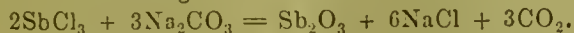
FERRIC HYDRATE. (*Ferri peroxidum hydratum*, B. P.) Normal ferric hydrate is represented by the formula $\text{Fe}'''\text{H}_3\text{O}_3$ or $\text{Fe}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$, but the hydrated oxide of the Pharmacopœia appears to have the composition $2\text{Fe}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$. It is obtained as a precipitate by pouring a dilute solution of ferric sulphate into a solution of sodic hydrate:



In the above equation normal ferric hydrate and sulphate of sodium are given as the products of the reaction, but the composition of the precipitated hydrate varies according to the temperature and strength of the solutions.

FERROSO-FERRIC OXIDE (Magnetic oxide of iron.) The composition of normal ferroso-ferric oxide is Fe_3O_4 or $\text{FeO} \cdot \text{Fe}_2\text{O}_3$. The compound termed *Ferri oxidum magneticum* in the Pharmacopœia is a ferroso-ferric hydrate containing only a small portion of ferrous oxide, FeO . It is precipitated from a solution of ferric and ferrous sulphates by the action of sodic hydrate. The ferric sulphate is produced by the first part of the Pharmacopœia process.

ANTIMONIOUS OXIDE, Sb_2O_3 (Trioxide of antimony; *Antimonii Oxidum*, SbO_3 , B. P.) This body is analogous to ferric oxide in molecular structure. It is prepared by the action of water and sodic carbonate on antimonious chloride SbCl_3 . When a solution of the chloride is poured into water, a precipitate of oxychloride of antimony (a compound of oxide and chloride) is produced; and when this precipitate is exposed to the action of sodic carbonate the whole of the chlorine is displaced by oxygen. It may be prepared in a more direct manner by pouring a solution of antimonious chloride into a boiling solution of sodic carbonate:



The secondary products of this reaction are sodic chloride and carbonic anhydride.

In addition to the basylous oxides there are certain metallic dioxides, typified by *peroxide of hydrogen* H_2O_2 , which may be classified as a distinct group. The only pharmaceutic representation of this group is the useful oxidising agent

MANGANIC PEROXIDE, MnO_2 (Manganic dioxide; *Black oxide of manganese*, MnO_2 , B. P.) This body might be represented, as a compound of manganous oxide and oxygen, by the formula $\text{MnO} \cdot \text{O}$, for the second atom of oxygen seems to be retained by a feeble attractive force. When treated with acids the peroxide does not form corresponding salts, as its unstable oxygen plays an independent part. Thus, when heated with strong sulphuric acid it yields manganous sulphate, water and free oxygen.



When the basylous *manganous oxide* is acted upon by sulphuric acid the same compounds are formed, but no oxygen is evolved:



Again, when the peroxide is heated with hydrochloric acid, half of its oxygen displaces an equivalent proportion of chlorine:—



When manganous oxide is substituted for the peroxide no chlorine is liberated:



Manganic peroxide is placed in the Appendix of the Pharmacopœia among articles employed in the preparation of medicines.

DENSITY TEST FOR UNGUENTUM HYDRARGYRI.

THE *Chemical News* of last week contains the following abstract of a paper contributed by Mr. GUSTAVUS PILE to the *American Journal of Pharmacy*:—

The relative density of mercurial ointment, or its specific gravity, although not usually alluded to, may furnish valuable information, and, as it is a means often resorted to in detecting adulterations in other preparations I determined to apply that test also in the examination of this ointment,

especially as the most usual cause of inferiority is occasioned by an insufficient quantity of mercury being employed.

To prove the delicacy of the test, I made experiments with ointments of two different strengths; the one containing 50 grains of mercury in 100 grains of the preparation; the other containing 49 grains of mercury in 100 of the preparation. The specific gravity of each was taken, which, in the first instance, was 1.700, and in the second 1.683, showing a difference of .017, where the difference of the mercury is but one grain in a hundred.

From actual trials with ointments made of various proportions of mercury and grease, the following table was formed:

1	part mercury to 10 parts grease =	sp. gr.	.981
2	" " 10 " " =	"	1.065
3	" " 10 " " =	"	1.147
4	" " 10 " " =	"	1.229
5	" " 10 " " =	"	1.311
6	" " 10 " " =	"	1.393
7	" " 10 " " =	"	1.471
8	" " 10 " " =	"	1.548
9	" " 10 " " =	"	1.625
10	" " 10 " " =	"	1.700

In taking the specific gravity of the ointment, the following precautions are necessary:—

It should be carefully introduced into a thousand grain bottle, so that the neck may not be soiled; about 100 grains will answer. After being warmed gently so as to melt the ointment, it is set aside to cool, by which it becomes solid and free from air. The exact amount of the ointment is then ascertained, the bottle being previously tared. After filling the bottle with water at 60° F., the weight of the contents is observed and the specific gravity calculated in the usual manner. As an example, suppose the ointment introduced is 80.5 grains, and, after filling the bottle with water, the total weight is 1028.5 grains. The water alone would then weigh $1028.5 - 80.5 = 948$ grains; consequently the difference between this number and 1000 is the amount of water displaced, which is 52 grains; and the specific gravity is found by dividing the weight of the water into the weight of the ointment. $80.5 \div 52 = 1.548$ is the specific gravity, and by reference to the table, we see it would contain 8 parts of mercury to 10 parts of grease.

I may here remark that even in an ointment properly made, a slight discrepancy from the table may occur from using different proportions of lard and suet; but the variations from this cause are but slight.

VARIA.

The *Lancet* calls attention to the following method of preserving sulphate of iron from oxidation, devised by Signor PAVISI:—Mix four parts of pure crystallized sulphate of iron, and an equal quantity of finely-powdered gum arabic, with distilled water, and evaporate the solution in a water-bath, at a low heat, till it has a sufficient consistency to be poured out on plates of glass. When it has been poured out in this way, and allowed to dry at a temperature of 30° Cent. in the dark, it may be cut up into lozenges, which can be kept for any length of time in a coloured stoppered bottle.

It appears that the terrible compound, nitro-glycerin, may be rendered non-explosive by a method comparable with Mr. Gale's method of protecting gunpowder. According to the *Mining Journal*, the recent accidents with the new explosive agent have induced Mr. Nobel to turn his attention seriously to the subject, and he is now enabled to state that by mixing the nitro-glycerin with methylic alcohol, it is rendered unexplosive, either by percussion or heat. When required for use water is added, which absorbs the spirit, and the oil sinks to the bottom of the vessel, whence it is drawn by a syphon. It is stated that experiments for testing the value of this discovery have already been made in America, and have given highly satisfactory results.

M. Linné's researches on the physiological action of narceine have led him to the following conclusions:—Narceine is unquestionably of all the alkaloids of opium that which has the greatest narcotic power. In the majority of

cases morphia and codeia do not produce as sound or as prolonged sleep as results from the use of narcine. Narcine differs from the other alkaloids of opium in producing little perspiration, and in causing no loss of appetite or nausea. So far from producing constipation of bowels, it causes relaxation, and, in large doses, actually gives rise to diarrhœa. It not only produces sleep, but diminishes pain. It has one peculiar action: it suppresses the flow of urine.

To prevent the formation of false membrane in croup, M. Guillon introduces pulverized nitrate of silver into the pharynx and larynx. The instrument he employs consists of a wooden tube or barrel, in which the powdered caustic is placed. At one end it is connected with an india-rubber bag, and at the other with two tubes—one bent, which is directed towards the larynx; and the other straight, through which the powder is projected against the pharynx behind the pillars of the velum pendulum palati. A description and figure of the instrument appeared in the *Gazette des Hôpitaux* and in the *Bulletin Général*.

An interesting paper by Mr. J. P. Gassiot was read at a recent meeting of the Royal Society. According to this paper, those Fellows of the Royal Society who were acquainted with the late Mr. John George Appold have often expressed their admiration at the various scientific arrangements which he from time to time adapted to his dwelling-house in Wilson-street, Finsbury-square. However intense might be the frost of winter or the heat of summer, or the brilliancy of the gas with which his rooms were lighted, when once under his hospitable roof you enjoyed a pure and refreshing atmosphere. Much of this was undoubtedly due to the steam-power he always had at command connected with his business premises immediately adjacent to his dwelling-house, by which he could at any time force a current of fresh air at a given temperature into any of his rooms; indeed, Mr. Appold always contended that dwelling-houses could not be made thoroughly comfortable as habitations without the aid of steam-power; but among the many of his arrangements to obtain equable temperature in rooms, there were also those that do not require the aid of steam-power, so seldom applicable in private dwellings, but which, nevertheless, might be easily adapted with comfort and advantage as regards the health of the inmates. These were his automatic temperature regulator and his automatic hygrometer. Mrs. Appold has had the original apparatus repaired and placed in perfect working order by Mr. Browning, who has offered them in her name to the President and Council of the Royal Society. She desired Mr. Gassiot to express her hope that they will oblige her by retaining them among the other scientific apparatus belonging to the Royal Society, as a mark of respect to the memory of one who always esteemed the honour he received when he was elected into that body in June, 1853.



GENERAL MEDICAL COUNCIL.

THE Session of the General Council of Medical Education and Registration commenced on the 17th ultimo, and terminated on the 29th. The chair was occupied by Dr. Burrows, the President of the Council. As full and independent reports have been published by our medical contemporaries, we are enabled to lay before our readers a summary of the proceedings connected with those subjects which concern dispensers as well as prescribers of medicine.

MEDICAL ACTS AMENDMENT BILL.

The Council devoted several days to the discussion of a Bill for the amendment of the Medical Acts, drafted by Mr. Thring, the consulting counsel of the Home Office. This proposed Government measure embraces substantially the Bill drafted by the Council during the session of the last year. It contains, however, a new clause to the effect that persons

holding diplomas of certain foreign and colonial universities and colleges may, under proper restrictions, be placed on the British Register. The penalty clause of the draft Bill, as amended by the Council, is as follows:

"If any person practising medicine or surgery, or engaged in the cure or treatment of diseases or injuries, not being registered under the Medical Acts, takes or uses any of the designations enumerated in Schedule A to the Medical Act, 1858, as amended by this Act, or by any other of the Medical Acts, or the designation of physician, surgeon, doctor, or apothecary, or any other designation used by or used to distinguish duly qualified practitioners of medicine or surgery, or any class thereof, or the designation of professor of medicine or of professor of surgery, he shall, for every such offence, be liable, on summary conviction, to a penalty not exceeding £20."

The saving clause, which was unanimously adopted by the Council, specially concerns our readers: "Nothing in this Act shall prejudicially affect any occupation, trade or business, rights, privileges, or employment expressly saved from the operation of the Medical Act, 1858, or affect the rights or interests of any person or class of persons expressly exempted or protected by any provision of any of the Acts described in the schedule to this Act."

This clause of course confirms the 54th section of the Act of 1858, which provides that nothing in the Act shall in any way affect the lawful occupation of chemists and druggists and dentists. The draft Bill was finally agreed to, with some trifling alterations; and the Executive Committee were instructed to press on the Government the expediency of its being adopted as a Government measure.

INVESTIGATIONS INTO THE PHYSIOLOGICAL ACTION OF MEDICINES.

Dr. ACLAND presented a memorial from the Physiological sub-section of the British Association assembled in Birmingham in 1865, suggesting that the General Medical Council should, by pecuniary grants and the appointment of suitable persons, undertake investigations into the physiological action of medicines. The memorialists reminded the Council that a few agents, when administered in poisonous doses had alone been made the subjects of such research, and that whilst the remedial effects of even such well-known agents as quinine had been admitted for ages, their modes of action were still unknown. In conformity with the suggestion of the physiologists, Dr. Acland proposed that £250 should be devoted to the obtaining investigations or reports calculated to promote a precise knowledge of the efficacy of remedial agents.

Dr. STOKES seconded the motion.

Sir D. J. CORRIGAN moved, as an amendment:—"That the proposed investigation does not come within the province of the General Medical Council; nor, were it within their power, have they any legal authority to expend their funds on such an inquiry."

After a long debate the amendment was carried by 16 votes to 5.

REPORT OF THE PHARMACOPŒIA COMMITTEE.

Dr. QUAIN presented the following report of the Pharmacopœia Committee:—

"The Pharmacopœia Committee have to report that, since the date of their last report, Messrs. Redwood and Warrington have continued to be engaged in the duty assigned to them; and they have so far completed their work that the whole of the matter, with the exception of the appendix, is now in type. The Committee have reason to hope that the volume will be ready for circulation, in proof, amongst the members of Council, in three months from the present time. Under these circumstances, the Committee beg leave to direct the attention of the Council to the resolution adopted at the meeting of last year, as follows:—

"That it is desirable to have a proof copy of the new Pharmacopœia in the hands of the members of the General Medical Council at least one month before the meeting of the General Medical Council, at which the opinion of the Medical Council is to be given relative to its being published, in order to afford to each member of Council the opportunity of making such suggestions to the Committee as may appear desirable."

"As the Committee anticipate that the work will be ready some considerable time before the next ordinary general meeting of the Council, the Committee would wish to receive such further directions as the Council may feel it necessary to give them on this subject. The Committee, before concluding their report, desire, in reference to an impression which seems to prevail that some unnecessary delay has taken place in the production of the Pharmacopœia, to assure the Council that no time has been spent in the work which was not necessary.

"The Committee beg to inform the Council that they have not hitherto found it necessary to make use of any portion of the funds placed at their disposal, by order of the Council.

"R. CHRISTISON, Chairman."

SYMBOLICAL FORMULÆ OF THE BRITISH PHARMACOPŒIA.

The following important communication from the President of the Chemical Society was brought under the consideration of the Council.

"To the President of the General Council of Medical Education and Registration.

"Burlington House, March 19th, 1866.

"Sir,—The President and Council of the Chemical Society venture to call the attention of the Medical Council to the system of chemical notation adopted in the British Pharmacopœia; and as they are informed that a new edition of that Pharmacopœia is in course of preparation, they entertain a hope that it may not be an inopportune moment to urge upon the Medical Council the desirableness of considering whether, in the forthcoming edition of the work, the use of chemical symbols could not be advantageously dispensed with altogether. In the few cases which may seem specially to call for the use of such formulæ, a per-centage representation of the composition of the body would, it appears, supply all the necessary data.

"The grounds on which the President and Council of the Chemical Society have been induced to suggest this course are these:—

"The system of notation at present adopted in the British Pharmacopœia is constructed in conformity with views which are rapidly disappearing from chemical teaching in this country.

"The Pharmacopœia is necessarily the text-book on which the examination of students of medicine and pharmacy in pharmaceutical chemistry are based. It appears, therefore, extremely desirable that no work shall be put forth on official authority, such as that of the Medical Council, which shall be at variance with the views propounded by many of the most active experimental leaders and principal teachers of chemical science; or which shall oblige the teacher to adopt a double numerical system in his exposition of the facts of chemical science to his pupils—a course which is always a source of embarrassment both to professor and learner.

"It is obvious that the adoption of a plan such as the one now suggested does not necessitate any expression of opinion on the part of the Medical Council upon a subject which is still under discussion. At the same time, it will relieve the Council from the inconvenience of appearing pledged to the maintenance of doctrines which are no longer believed to be correct by many of the most competent to form an opinion on the subject.

"The President and Council of the Chemical Society trust that the importance of the subject will sufficiently explain their anxiety to bring this matter under the consideration of the Medical Council.

"WM. ALLEN MILLER,

"President of the Chemical Society.

"To Dr. Burrows."

Dr. APJOHN, in reference to the above letter, said that however highly he respected the members of the Chemical Society, he thought the statements contained in their memorial could not be sustained, especially that which alleged that the old system of chemical notation was rapidly disappearing. It certainly was not disappearing in Ireland and Scotland, but it might be thought that it was of little importance to consider what was done in those countries, and that the Council should be guided entirely by the views of the gentlemen in London. He had satisfied himself, however, that the great majority of chemical teachers in London adhered to the old

system. Dr. Christison, he believed, was originally in favour of retaining that system, but had since changed his views on the subject. At a meeting of the Pharmacopœia Committee Dr. Christison asked Professor Redwood his opinion, and that gentleman stated that the majority of chemists in London adopted the old system of notation, and that only a few distinguished men had adopted the new. He (Dr. Apjohn) could not think that it would be desirable to abandon the old system which was very simple and comprehensive, and was used by forty-nine fiftieths of the chemists of Great Britain and France. He was no opponent, however, of the modern unitary system, and he should not be unwilling to see it included in the Pharmacopœia, together with the old notation. He concluded by proposing "That it be an instruction to the Pharmacopœia Committee to give for each therapeutic compound of definite constitution, occurring in the forthcoming edition of the Pharmacopœia, two formulæ,—the first being that in ordinary use at present, the second being one constructed in accordance with the more recent views of what is called the 'unitary system.'"

Dr. AQUILLA SMITH seconded the motion.

Dr. ANDREW WOOD quite agreed to the proposal to adopt both systems. He thought they should endeavour to preserve the scientific character of the work; and by introducing the old system and the new, they would be accustoming the student to the transition, should the latter come to be generally adopted.

Dr. CHRISTISON said that if the Pharmacopœia did not prove satisfactory to the medical profession, it ought to prove so. In the former edition there were, no doubt, some very decided errors (though they were very few in number), which were made the cover for assaults upon the work in other directions in which it was blameless. He believed it was generally received in Scotland and Ireland with great satisfaction. Some difficulties had arisen in England with regard to defects which were afterwards found not to be of so serious a character as at first was supposed, and he believed that the Pharmacopœia had been rising in the estimation of those who were best qualified to judge of its merits; and no doubt they might ascribe a great deal of the opposition to the Pharmacopœia to the inevitable fact that changes were made which compelled practitioners in every branch to depart from old systems and learn new ones. Time, however, had reconciled practitioners to such changes, and he believed there was every prospect that the Pharmacopœia would be generally welcomed by the profession. No doubt it would contain some errors, but he hoped they would not meet with the violent criticism to which the errors contained in the previous edition were subjected. He was of opinion that it was not necessary to introduce the symbols into the Pharmacopœia, which ought not to be overloaded with scientific matters, but only with that which is of real use to the practitioner in medicine and pharmacy. After some considerable discussion on the subject of using the chemical symbols, the committee decided to abide by the decision of the French pharmacutists, who were occupied in considering the subject. The committee afterwards learned that the symbols were to be retained in France, but subsequently the President of the Council received the very important communication from the Chemical Society which had been read, asking the Council not to prejudice the question, but to leave out the symbols altogether. He believed there were very few chemists of any note who were not members of the Chemical Society, and a communication from authorities of such high eminence deserved the most serious consideration on the part of the Council. Under these circumstances the Pharmacopœia Committee was in a very different position from that which it previously occupied. A compromise had been agreed to that both methods should be introduced. But the application from the Chemical Society had placed the matter in a different light. His two colleagues, Dr. Quain and Dr. Sharpey, were of opinion that it was unnecessary to introduce the chemical symbols; but Dr. Apjohn still maintained the view which he previously held. The opinion of Dr. Redwood was asked on the subject, and he very strongly recommended that in the present state of matters no chemical notation should be introduced. It was not an object of the Pharmacopœia to teach students chemistry: its great object was to teach pharmaceutical chemists what they were to prepare and preserve for the prescriptions of physicians and surgeons. The committee arrived at their opinion cautiously, and he believed impartially; and he had

heard nothing advanced by Dr. Apjohn to shake that opinion. When it was remembered that three members of the committee adopted one view and only one the other, and that those three members were supported by the very decided opinion of Dr. Redwood and backed by the application of the Chemical Society, he hoped the Council would support the views of the majority of the committee.

After a lengthened discussion Dr. Apjohn's motion was put to the Council and carried by a majority of 11 against 8.

METRIC WEIGHTS AND MEASURES IN THE PHARMACOPŒIA.

The following letter from the Metric Committee of the British Association for the Advancement of Science was read:—

"To the General Council of Medical Education and Registration.

"10, Farrar's-buildings, Temple, May, 1865.

"Gentlemen,—We are desired by the Metric Committee of the British Association for the Advancement of Science to seek your aid in promoting the practical adoption of the Metric Weights and Measures Act, passed in 1864, being the 27 and 28 Vict., c. 117: 'An Act to render permissive the use of Metric Weights and Measures in the United Kingdom.' Although this law is of a permissive character only, yet it allows full scope for the extensive application of the new system, and we trust that every opportunity will be seized for resorting to it, with a view of putting an end to the manifold defects and inconveniences of the present practice.

"We understand, with pleasure, that such an opportunity now occurs for introducing the metric decimal system into medicine and pharmacy, since the British Pharmacopœia, published in January, 1864, is about to appear in a second edition. The objection formerly urged to the introduction of the metric system side by side with the imperial, in all the formulæ for the preparation of drugs and chemicals, that the metric weights and measures were not yet sanctioned by the Legislature, is now removed by the passing of the Act; and we hope, therefore, that your Council will give its sanction to the proposed useful addition.

"In submitting to you the desire of the Metric Committee of the British Association that the knowledge of the metric system may be promoted in medicine and pharmacy, we would only add that, for international purposes, and especially for the use of foreign practitioners, and of British chemists in foreign countries, the ready comparison of the imperial with the metric weights and measures will be of great practical value; and, moreover, will tend to give effect to a reform expected to be highly useful to this country, and of extensive influence in social and international intercourse.

"We have the honour to be, Gentlemen,

"Your obedient servants,

"JOHN BARINO, F.R.S., LL.D.,

"Chairman of the Committee.

"JAMES YATES, M.A., F.R.S.,

"Member of the Committee."

Dr. SHARPEY proposed the following resolution, which was agreed to:—

"That the General Medical Council are not prepared to adopt, in its full extent, the suggestion of the Metric Committee of the British Association, but the Council will direct that a complete comparative table of metric and imperial weights and measures, with instructions for their mutual conversion, shall be inserted in the forthcoming edition of the British Pharmacopœia."

PHARMACEUTICAL SOCIETY.

CONVERSAZIONE.

(From our own Reporter.)

On the evening of Tuesday, the 15th ult., the President, Vice-President, and Council of the Pharmaceutical Society entertained a large assembly at their house in Bloomsbury-square. The Society was of course strongly represented by town and country members, associates, and students, and among the visitors we noticed many eminent representatives of Science, Art, and Literature. In every room there were so many beautiful and curious things to look at and talk about, that the time passed swiftly by, and it was near midnight when the majority of visitors left.

We will not attempt to enumerate the various objects exhibited by the friends and supporters of the Society, but will confine our remarks to the most attractive parts of the display. A large collection of medical and food-producing plants from the Royal Botanic Society's Gardens, was exhibited by Professor Bentley, who took care to call attention to a beautiful specimen of *Sarracenia purpurea* in full flower, to a flowering plant of *Canna edulis*, and to a remarkably healthy specimen of *Podophyllum peltatum*. The collection comprised many of the official plants; the tea, coffee, and cacao plants; the oil palms; and many important spice and grain-bearing plants. In the same room a curious and extensive series of models of Fungi was exhibited. The vegetable kingdom also supplied the chief wall decorations of some of the rooms, as these were beautiful specimens of dried ferns and seaweeds, arranged and exhibited by Mr. Jardine. The mineral kingdom was well represented by Mr. Tennant's extensive and valuable collection of precious stones, and by an interesting series of minerals contributed by Mr. B. M. Wright. Messrs. Johnson and Matthey sent one of their costly platinum boilers and large quantities of the precious metals and their salts. Messrs. Hopkin and Williams exhibited a bar of thallium and specimens of thallium salts. The most noteworthy pharmaceutical articles were the scale preparations of iron and the lactates shown by Messrs. T. Morson and Son; the preparations of ether and peroxide of hydrogen shown by Mr. Robbins; and the improved pancreatic emulsions prepared by Mr. Schweitzer, of Savory and Moore's. Passing from the laboratory to the shop, we must not omit to mention that Messrs. George Treble and Sons exhibited a working model of a chemist's window, with improved fittings, also several pieces of shop furniture of new design. Mr. Arkenhurst showed an improved dentist's chair, with footstool and pedestal. Microscopes were contributed by all the famous makers, and many novel objects were shown by their aid. The specimens of *Trichina spiralis* exhibited by Mr. Collins and others were examined with much curiosity, and the gorgeous play of prismatic colours on the surface of a soap bubble delighted all who peeped into Mr. Ladd's microscopes. Mr. Ladd also exhibited Holtz's new electrical machine in action, and performed some brilliant experiments by its aid. Messrs. Horne and Thornthwaite showed one of Ackland's dividing engines for graduating hydrometers and burettes. Mr. Glover showed apparatus for the measurement and carburation of coal-gas. Mr. Ansell, in the laboratory, exhibited and explained his ingenious fire-damp detectors and alarm-bells, which will probably be as familiar to coal miners as the "Davy" and "Geordie" ere many years have elapsed. Messrs. Spencer, Browning, and Co. showed apparatus for spectrum analysis; Messrs. Elliott Brothers a new registering anemometer, called an "anemograph;" Mr. How a collection of chemical apparatus; and Mr. Larkin his well-known models of crystals and dissected cones.

Many valuable works of art were displayed in the rooms. Mr. T. Morson, jun., sent several pictures, including a most interesting water-colour sketch by George Cruikshank, entitled "Shakespeare's First Appearance on the Stage of the Globe in 1564, with some members of his Company." The fact that this powerful work was recently executed by the great artist whose name was famous in the early part of this century is not more extraordinary than the fact that George Cruikshank himself enjoyed the conversation quite as much as the youngest student present did. Messrs. Vokins also contributed some valuable paintings; Mr. Butler, some fine busts; Messrs. Copeland and Messrs. Phillips, porcelain and majolica ware; Messrs. Mappin, Brothers, an elegant group in oxidised silver; Messrs. Jackson and Graham, bronzes; Mr. Campkin, a collection of ancient swords; and Messrs. Phillips Brothers, a remarkable effigy of Dante. One of the curiosities which attracted much attention was an old chemist's sign, injured by the great fire of London, shown by Messrs. Corbyn and Co.

In the centre of the Library was a large case containing joints of fresh meat preserved in paraffin by Dr. Redwood's process.

During the evening, Mr. Highley exhibited in one of the smaller rooms a series of microscopic photographs upon a screen by means of the oxyhydrogen lantern. Mr. FitzCook showed the results obtained by the graphotype process, a process for producing cheap substitutes for woodcuts. In

the lecture theatre Dr. Thudichum delivered a lecture to a crowded audience on entozoa, and exhibited numerous specimens on the screen. The *Trichina spinalis* was shown in the living state, being taken in the presence of the audience from the back of a rabbit in which a colony of these terrible flesh-worms had been established. At the conclusion of the lecture, Mr. Larkin produced a vivid flash of light by the combustion of an ounce of metallic magnesium in powder, mixed with chlorate of potassium; and Mr. Debenham used this light to produce a memorial of the conversazione, in the shape of an instantaneous photograph of the company.

The large slate table of the laboratory was converted into a refreshment buffet, and the furnace was turned to good account in the preparation of certain popular infusions. Ice machines were also in action throughout the evening.

THE PRESIDENT'S ADDRESS.

At the Annual Meeting of the Society, held on the 16th ult., Mr. Sandford, the President, delivered the following address:—

"Gentlemen,—On the two previous occasions it has been my duty—a very pleasing duty—as President, to welcome you here at the annual meetings of the Pharmaceutical Society; it has been a pleasing duty, not simply because it is always pleasant to meet old friends, but also because we have been able on each occasion to congratulate ourselves on the progress of the Society in which we are so much interested,—a progress repaying us for all the time and labour we give to its interests.

"There was a time when that progress seemed doubtful; but warned rather than dismayed by the 'slack,' we never abated one jot in our efforts. It might be, too, that in losing our great captain, the man who launched our bark, and steered her successfully through early dangers into mid-channel, we all felt the greater necessity for both united and individual exertion, and so were ready at the flood-tide to make such headway as I think would have satisfied even him, whose motto in pharmaceutical matters was always 'Onward.'

"Well, gentlemen, it may possibly be remembered by some of you, that when we met here last year, we were in the midst of our exertions to obtain an extended Act of Parliament, which would have gone far towards completing the work on which, for a quarter of a century, we have been engaged. I was very sanguine then, and thought the goal was in sight. It seemed to me that the time had arrived at which the House of Commons would recognise the difference between 'free trade' in matters of ordinary buying and selling, which had done so much to benefit the public, and free trade in pharmacy, which, without any counterbalancing advantage, deprived the public of one great element of safety. I mean the educational qualification of dispensers of medicine. The Medical Council had declared such a qualification necessary, and had proposed to enforce it by an addition to their own Act. The Medical Boards in governmental departments had refused to entrust the dispensing for the army to other than those who could produce certificates of qualification from the Board of Examiners appointed under the Pharmacy Act. The House of Commons had been loud in their recognition of the necessity on the second reading of our bill; and witnesses of the highest authority had been clear and unanimous on the subject in giving their evidence before the Select Committee appointed by the House of Commons to investigate the matter.

"Such was the state of the case when we met here last May. But I had been too sanguine of success. The committee which had heard the witnesses came to a decision in a great degree opposed to their evidence, affirming only that dealers in poisons should be 'examined and registered.' I must confess to a feeling of disappointment at this result, but to no disheartenment. I regard my expectation only as deferred. I think it easy to prove that if the man who only sells poisons should be educated, a still greater necessity exists for qualification in one who compounds them; and therefore I believe that, sooner or later, that necessity will be recognised by Government.

"For the moment the question of pharmaceutical legislation is in abeyance, but I would urge you all to keep it in remembrance. Another session of Parliament will probably bring us into action again; and whenever we do find the oppor-

tunity to go on, I for one shall go to the work in the spirit, as I believe, of the founders of our society—of Jacob Bell, to whom I have already alluded—with a firm conviction that the Pharmaceutical Society was intended to embrace all worthy members of the pharmaceutical profession, and that until it does so it will fail fully and perfectly to effect its object—the advancement of chemistry and pharmacy to their proper rank in this country.

"Now, gentlemen, I fear that in the presence only of those who have recognised the necessity for education, and given proof of that recognition in the only two ways open to us—the elder by subscription, the younger by examination—becoming members of this, which is but a voluntary society, I may lay myself open to the charge of undervaluing it. Nothing could, I assure you, be more unjust. No man values that membership more highly than I do; it has brought me into communication with men whom I may describe (adopting the language of some who do not belong to us) as 'the élite of the trade'—men whose acquaintance, but for this circumstance of fellow-membership, I should probably never have enjoyed. If I might venture to add to this assertion an evidence in proof that I have valued and ever endeavoured to uphold the society, I should point to the mark of honour and confidence which it has pleased your council, on no less than three occasions, to confer on me. But I do feel, however delightful it may be to have a select association, that the Pharmaceutical Society was established only as a means to an end; and the wider the grasp of the society, the nearer it will be to the attainment of that end. I therefore urge you, gentlemen, to act liberally towards those who have not thought it necessary as yet to join us, in the event of obtaining such an extension of the Pharmacy Act as we require, under whatever name that extension may be called; always remembering, however, that the title of 'Pharmaceutical Chemist' is a vested interest given under the Act of 1852; it is the one title legalized, and the one vested interest to be protected, for the original members of the society as a foundation, and, beyond them, for those only who pass the Major Examination.

"I ask you to give nothing without an equivalent; but a power to enforce the examination of all future chemists would be an equivalent. I have had various occasions to regret that chemists are not all registered, and I particularly remember one which occurred two years ago. Feeling, as every man in our business must, the difficulties which beset us in the matter of spirit of wine, for which all persons seem naturally to resort to the chemists, I made application to the Chancellor of the Exchequer, asking that we might be allowed, for a small license fee, to retail it under certain regulations. I had several letters from the right honourable gentleman on the subject. He took the trouble to consult the Board of Inland Revenue, and, indeed, seemed to incline to the opinion that such an arrangement would in itself be good; but his difficulty lay in the fact that chemists and druggists were an unregistered body; and, therefore, other men, falsely assuming the name, might make an improper use of the privilege. You, too, saw the value of registration, when by it we were enabled to gain exemption from serving on juries.

"In quitting this chair, it may be that I shall feel, as I have already stated, some disappointment at the work not being completed, for which we have striven so hard; but I am cheered by the confident hope that it will be in the time of my successor, and the conviction that the efforts we made to attain our end have been productive of great good to the society, exciting interest for its advancement *within*, and a respect for its achievements *without*.

"Other circumstances too have occurred during my period of office to which I shall ever recur with lively satisfaction, and not least among them I think the progress of the Benevolent Fund. It has been my privilege to preside over the first election of annuitants, and to announce *success* to an old member who, by adverse circumstances, had been brought to such strait, that but for it he must probably have sought a home in the workhouse for the remainder of his days; and it is a greater satisfaction still to see that fund increasing at such a rate as to justify the announcement, which you will find in the next number of our Journal, that the Council will be ready in October next, to grant two further annuities, of similar value to the two granted last year. The annuities, and an outlay sufficient to secure a home and education for

the child of a deceased member, beyond the ordinary casual relief afforded to other applicants, must surely be pleasing to all. It was rightly predicted by some members of our Council that disbursements from the benevolent would tend to increase it. The Secretary's report will give you exact particulars up to the end of 1865; but I may be permitted so far to anticipate our next year's statement, as to say that up the present time the subscriptions of 1866 far exceed those of the same portion of last or any previous year. I would guard you, however, against any abatement in your liberality by an over-confidence in our resources. When annuities were first planned, it was on the understanding that none should be given until the accumulated fund had reached £10,000; including our investments since Christmas, it only now reaches £7,000; and I am sure you will agree with me in thinking that the Council would not be justified in granting annuities beyond the amount of the interest on *Capital*. We are your Trustees for the proper distribution of this fund, and by the new system of administering it we become the Trustees also of the annuitants; and in the event of a failure of the income, which by your votes you promise to them, they would justly call Mr. Tidd Pratt to their aid, and convict us at least of miscalculation. Our *Benevolent* fund is in fact an *Insurance* fund; an insurance indeed from which we none of us *hope* to benefit, but which we should all view in a business way as if we did.

"Gentlemen, we meet on these occasions to consider and discuss the general affairs of our Society, which the Secretary will bring before you presently in the Annual Report; that is the formal document presented by your Council at the close of its official existence; but it is usual for your President to offer some few remarks, less formal in their character, on passing events, and I would avail myself of the opportunity to say a word or two on an old subject lately revived—I mean the *early-closing movement*. It is a subject on which, as a Society, I think we can do nothing; we have always carefully avoided introducing matters connected with the private arrangements of trade into our corporate proceedings; they would assuredly be sources of discord, therefore I hope we shall continue to exclude them; but as individuals it is quite competent for us to consider this question. It is a question of great interest to many associates of our Society, and, indeed, I may say, to members also; but setting ourselves aside for the moment, I think, in the interests of our assistants, we are bound to weigh the matter fairly, not regarding it as a source of antagonism between us, as some recent writers would, I fear, make it by their imprudent counsel, but with an honest desire to do that which is right between the employer and the employed. We cannot shut our eyes to the fact, that during the last few years a growing desire to curtail the hours of business has been manifest throughout the whole commercial community—bankers, merchants, and traders have met that desire in a liberal spirit, and even in our business many establishments, which, when I was an assistant, kept their doors open until eleven o'clock, now close them two hours earlier, and, as I may say from experience, without detriment to their interests. I have great faith in example,—for the advancement of this question, much greater than I have in combination. We see too often, by reports from provincial towns, that agreements to close are made, and very soon departed from; I believe in many cases the departure from the agreement commences accidentally, or by necessity; a man's particular inability to close on a certain night cannot be understood by his neighbour, and so is taken as a wanton disregard of his promise, and becomes actually a source of ill-feeling. Therefore, I say, let each man make his own arrangements, according to the requirements of his particular locality, and do his best to maintain them. I believe the public will acquiesce as readily in such arrangements by chemists as they will in those of other tradesmen."

PARLIAMENTARY INTELLIGENCE.

STANDARD WEIGHTS AND MEASURES.

A Bill has been brought before Parliament by the Government proposing to transfer imperial and secondary standards of length and weight, and all balances, apparatus, books, and documents in connexion therewith, from the custody of the

Exchequer to that of the Board of Trade, which is in future to perform all the duties relating to standards of weight and measure hitherto fulfilled by the Exchequer. Once in every ten years the three parliamentary copies of the imperial standards of length and of weight deposited at the Mint, the Royal Society, and the Royal Observatory are to be compared with the imperial standards and with each other. The secondary standards which are in use at the Exchequer, and are known as Exchequer standards, are in future to be called Board of Trade standards, and they are to be compared with the imperial standards once in every five years. The Bill further proposes to create a special department of the Board of Trade, to be called the "Standard Weights and Measures Department," which is to be under the control of the "Warden of the Standards," who is to report annually to Parliament. The custody of the standard trial pieces of gold, silver, and copper used for determining the justness of the coinage is to be transferred from the Exchequer to the Treasury Commissioners, who will in future perform all the functions of the Exchequer relative to the subject.

NITRO-GLYCERINE.

Mr. Milner Gibson has laid before the House of Commons a Bill, providing that nitro-glycerin shall be deemed to be "specially dangerous," as also any other goods which shall be so designated and declared by Order in Council, and that no warehouse owner or carrier shall be bound to receive or carry specially dangerous goods, and no specially dangerous goods shall be delivered to any warehouse owner or carrier, or sent by railway, ship, or other public conveyance, or deposited on any quay, without being marked with the true name and the words "specially dangerous," under a penalty not exceeding 500*l.* or (at the discretion of the Court) imprisonment not exceeding two years, with or without hard labour. The Petroleum Act of 1862, prohibiting the keeping (without license) of more than a certain quantity of that article within 50 yards of a house or warehouse, is to be applicable to the keeping of any quantity whatever of nitro-glycerin.

VETERINARY MEDICAL BILL.

The House of Commons have referred to Committee the following bill "To Prevent any Person who has not obtained the Diploma of the Royal College of Veterinary Surgeons from assuming the Title of Veterinary Surgeon."

Whereas her present Majesty, by royal charter bearing date the eighth day of March, in the seventh year of her reign, did for herself, her heirs and successors, grant unto the persons therein named, together with such others as then held certificates of qualification to practise as veterinary surgeons, granted by the Royal Veterinary College of London or by the Veterinary College of Edinburgh respectively, and such other persons as respectively then were and might thereafter become students of the Royal Veterinary College of London, or of the Veterinary College of Edinburgh, or of such other veterinary college, corporate or unincorporate, as then was or thereafter should be established for the purposes of education in veterinary surgery, whether in London or elsewhere in the United Kingdom, and which her Majesty and her successors should under her or their sign manual authorise in that behalf, and should pass such examination as might be required by the orders, rules, and by-laws which should be framed and confirmed pursuant to the said charter, should by virtue thereof be members of and form one body politic and corporate by the name of "The Royal College of Veterinary Surgeons," by which name they should have perpetual succession and a common seal, with power to sue and be sued, and to hold personal estate; and her Majesty did further declare and grant that the veterinary art, as practised by the members of the said body politic and corporate, should be thenceforth deemed and taken to be and recognised as a profession, and that the members of the said body politic and corporate, solely and exclusively of all other persons whomsoever, should be deemed and taken and recognised to be members of the said profession or professors of the said art, and should be individually known and distinguished by the name or title of Veterinary Surgeons; and in the said charter were contained certain regulations for the conduct and management of the affairs of the said corporation:

And whereas to encourage the progress of the veterinary art it is expedient that such of her Majesty's subject, as may from time to time require veterinary medical aid should be enabled to distinguish the members of the Royal College of Veterinary Surgeons from others who have not passed the examination requisite for entitling them to become members of the said College, and who are not members thereof:

Be it enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. This Act may for all purposes be cited as "The Veterinary Medical Act," 1866.

2. This shall take effect from the *first day of October, One thousand eight hundred and sixty-six.*

3. Any person, not being a member of the said Royal College of Veterinary Surgeons, who shall after the time appointed for this Act coming into operation take or use the name or title of Veterinary Surgeon, or who shall falsely represent himself to be a member of the said College, or who shall use any other name or title with intent to lead, or whereby the public may be led to believe that he is a member of the said Royal College of Veterinary Surgeons, shall, upon a summary conviction for any and every such offence, pay a sum not exceeding *five pounds* nor less than two pounds.

4. Provided nevertheless, that this Act shall not affect any person who shall have assumed the name or title of Veterinary Surgeon prior to *six months* previous to the passing of this Act.

5. Penalties under this Act may be recovered before two justices in manner directed by an Act passed in the Session holden in the eleventh and twelfth years of the reign of her Majesty Queen Victoria, chapter forty-three, intituled "An Act to facilitate the Performance of the Duties of Justices of the Peace out of Sessions within England and Wales with respect to summary Convictions and Orders," or any Act amending the same; and in Scotland by summary complaint before the sheriff, sheriff substitute, or two justices, or in burghs before the magistrates, in manner provided by "The Summary Procedure Act, 1864."

LAW AND POLICE.

CARRIERS AND CHEMICALS.—CHAS. RUMSEY AND CO. v. FARDELL.

(From our own Reporter.)

This was an action tried at the City Sheriffs' Court, before Mr. Commissioner Kerr, on Friday, the 8th inst., in which the plaintiffs sought to recover the value of a carboy of acetic acid, which had been broken in transit, plaintiffs being manufacturing chemists, of 120, Aldersgate-street, and defendant a carrier of 40, Gresham-street. Mr. Rumsey said he should be able to prove to the court that acetic acid had been sent to him by another firm in perfect good order. It did not reach its destination in safety, and witness contended that defendant was liable for the damage that had occurred. Mr. Fardell entirely denied his liability, and contended that the carboy must have been cracked or starred before it was delivered to him. He had to unload the carboy, and while he was about the work he heard a noise like the explosion of a bottle of champagne, or some effervescing liquor. He lifted the carboy down, and immediately the acetic acid ran out. It was a wonder it had not spoilt a large quantity of valuable goods. His Honour: "Acetic acid does not explode. It is perfectly harmless." Mr. Rumsey: "Of course it is." Defendant: "I admit that acetic acid is not explosive, but I wish to point out that the carboy must have been starred before it reached me." Mr. Rumsey: "That is certainly not the case, and I have a witness here who will state that the carboy was carefully packed and sent out in good order." His Honour while listening to the evidence carefully looked over his law books, and at last came to one entitled "Smith's Mercantile Law, Dowdeswell, sixth edition." He appeared to be much struck with one portion of this volume, and said "Mr. Fardell, listen to me for one moment. The law, as I find it, and as I must enforce it is thus laid down: At common law he (the carrier) stands in the situation of an insurer of the property entrusted to him, and he is answerable for any loss or damage happening to it

while in his custody, no matter by what cause occasioned, unless it were by the act of God, such as a tempest, or the Queen's enemies. In other cases, even his (the carrier's) entire faultlessness does not excuse him; thus he is liable for damages done by accidental fire or by robbery." Mr. Rumsey seemed rather surprised at this piece of law in his favour, and Mr. Fardell asked the judge if he would not hear a witness whom he could call. His Honour: "What is the use of my hearing your witness when the law is so clear? No doubt the case is a hard one so far as you are concerned, but the law is clear and defined. Plaintiff must have a verdict for the full amount claimed." It may here be remarked that the *dicta* as laid down in "Smith's Mercantile Law" were fully borne out by the reference notes. Each point was alluded to in quoted cases, and in one portion even strengthened by the opinions of the judges sitting in banco in reference to carriers' law. The chemists and druggists must admit that this ruling is of the very highest importance to them, and touches their trade most nearly.

SERIOUS CHARGES AGAINST A SURGEON.

At the Farnham police court, on Tuesday last, Lake Young, *alias* William Augustus Young, a man of genteel and intellectual appearance, was brought up on remand before F. R. Thresher, Esq., and Major Spring, charged with embezzlement, felony, and obtaining goods under false pretences. It appeared from the evidence of Dr. W. Davies, of York Town, Frimley, with whom the prisoner had recently been engaged, that in the month of April last the prisoner obtained his situation as assistant, upon what afterwards proved to be misrepresentations and a false certificate. A month's probation was mutually agreed upon, and it was the duty of the prisoner to attend patients and dispense medicine. At the expiration of the month, however, the prisoner was discharged, but for what cause did not appear. Shortly after his leaving the situation, it was discovered that an entry had been made in the day book of medicine supplied to a tradesman near Sandhurst, which, it afterwards transpired, had been paid for, and not accounted for by the prisoner, by whom the entry was made. Suspicion resulted from this omission which led to further inquiry, and it was then ascertained that several things belonging to the surgery were missing, including a caustic pencil-case, and several medical works, among them being Dr. Ferguson on "Surgical Treatment," Hutchinson on "Cases of Emergency," Tanner's "Practice of Medicine," etc. It was also found that the prisoner obtained wearing apparel and other goods from the tradespeople to a considerable amount, by means of false pretences, one of which was, that he was engaged permanently as a medical practitioner, and was desirous of opening accounts. He also represented that he had served in Messrs. Green's ships, and had practised as a surgeon in Australia, and was well known at Liverpool. The prisoner's gentlemanly demeanour, intelligence, and general conduct secured for him the credit he desired, but on his being discharged by Dr. Davies, the impositions rapidly became known, and persons anxious to prosecute turned up in all directions. On his asserting that he had entered into an agreement to remain with Dr. Davies for one year, he succeeded in obtaining a handsome watch, value ten guineas, from Mr. Porter, jeweller, Hartley Wintney, to whom he also stated that he had a daughter about to be married, and that he should therefore become an extensive purchaser. The police were subsequently communicated with, and it was found that he had succeeded in obtaining a fresh situation, under an assumed name, as assistant-surgeon to Dr. T. L. Hales Smith, of Fetter Lane, Fleet Street, London, where he was apprehended by Sergeant Hyde, of the Surrey constabulary. Search was made in the prisoner's rooms, and several pawnbroker's duplicates were found, one of which was for the watch in question. The officer then produced a list of the articles missing from Dr. Davies' surgery, and on allusion being made to the caustic pencil-case, Dr. Smith at once stated that it was presented to him by the prisoner shortly after his engagement. The prisoner cross examined the several witnesses with all the ingenuity and skill of a barrister, but did not succeed in shaking their testimony. The prisoner in defence admitted having given the caustic pencil-case to Dr. Smith, but emphatically denied taking it from Dr. Davies' surgery with any felonious intent. He also

stated that it belonged to the old stock of the Orphanage Asylum, Frimley, of which establishment Dr. Davies was medical officer, that he had used it in the profession generally, but did not attach any particular value to it. He was formally remanded for the completion of depositions, when he will be committed to take his trial on the above-mentioned charges. The medical works lost by Dr. Davies have not yet been recovered, with the exception of Tanner's "Practice of Medicine," which was found in his apartments at Frimley after he had left the neighbourhood. The prisoner wept bitterly on being removed to his cell.

ACCIDENTS.

SHOCKING ACCIDENT AT MALVERN.

An inquest was held at Malvern, on the 26th ult., before Mr. Hughes, coroner for Worcestershire, on the body of a little boy named Wallis, aged five years, who with his father, mother, and sister were dreadfully burnt with vitriol on the previous Monday under the following circumstances:—The father was employed by Messrs. Webb, vitriol makers, of Worcester, and on Monday had to take twelve earboys of vitriol from Worcester to Malvern. Being holiday time, he took his wife and two children with him, and they were seated with him in front of the wagon. On arriving at Malvern, and before delivering the vitriol at the destination—a soda water manufactory—the horses became frightened, and ran down a steep incline, the wagon striking a lamp post, breaking ten of the earboys, and throwing the burning liquid over Wallis and his family. All were dreadfully burnt, and the boy died on Thursday. The others are progressing as favourably as can be expected.

FATAL ACCIDENT AT A CHEMICAL WAREHOUSE.

An accident of a very peculiar character occurred at the warehouse of Messrs. Boor and Holden, wholesale chemical agents and merchants, Artillery Lane, City, on Saturday, May 26th, whereby the warehouseman, Mr. T. Douglas, thirty years of age, lost his life. Having occasion to go to the cellar for some "nitrous acid," he by accident broke the earboy. The acid escaping, he inadvertently threw upon it a quantity of sawdust, which caused nitric oxide to be freely evolved. He called Mr. Boor, who ordered a quantity of well wetted sand to be thrown on it, and in a short time the fumes ceased, but not before both Mr. Boor and the warehouseman were seriously affected. Both left business as soon as possible. Mr. Boor experienced very little ill effect from it, beyond slight sickness and sensation of choking, but the warehouseman, feeling very ill, went to bed immediately on getting home, and we are sorry to say he died the next morning at 10 o'clock, having hardly spoken between the period of the accident and time of death.

GOSSIP.

We are delighted to hear that Mr. Josiah T. Slugg, of Manchester, has been elected a Fellow of the Royal Astronomical Society, in consideration of his successful efforts to popularise the science by the introduction of cheap instruments and sound treatises.

Professor Prector, the Editor of the *American Journal of Pharmacy*, has resigned the chair of Theory and Practice of Pharmacy, which he has filled for twenty years at the Philadelphia College of Pharmacy. The students have presented to him a splendid tea-service as a testimonial of their appreciation of his long services and eminent acquirements.

The creditors of Charles Seanlan, druggist, Rochdale Road, Manchester, have agreed to accept a composition of 7s. 6d. in the pound, by three equal instalments, at three, six, and nine months from the 1st of May, secured by the joint and several promissory notes of the debtor and James Seanlan, Portmadoc, Carnarvon.

Provisional protection has been granted to Mr. Astley P. Price, chemist, 47, Lincoln's Inn Fields, for his improvements in the means of effecting the combustion of fuel, and in apparatus employed therein.

C. W. Robinson, chemist and druggist, Burslem, Staffordshire, has arranged to pay his creditors a composition of 2s. 6d. in the pound, by two instalments, at three and six calendar months from date of deed.

Mr. J. Bell has taken the business lately conducted by Mr. W. Jones, chemist, 22, Robertson Street, Hastings.

R. L. English, chemist and druggist, Pickering, York, has arranged to pay his creditors a composition of 4s. in the pound, by four quarterly instalments.

William Harrison, chemist and druggist, 57, Red Bank, Manchester, has made an assignment of his estate.

William Flocks, chemist and druggist, formerly of Wells, Somersetshire, but now of Southampton, has made an assignment of his estate.

Simon Lewis, chemist and druggist, Tranmere, Chester, has made an assignment of his estate.

The first dividend of 3s. 9½d. in the pound, has been paid on the estate of Joel Scott, chemist and druggist, 2, High Street, Market Harborough, Leicester.

The creditors of F. Wright, chemist, 4, Woodman's Terrace, Westow Hill, Upper Norwood, Surrey, have agreed to accept a composition of 8s. in the pound, payable by four equal instalments, on 9th August, 9th November, 9th February, 9th May.

Edward Foster, druggist, Preston, Lancashire, has arranged to pay a composition of 2s. in the pound.

John Garforth, chemist and druggist, Scotland-street, Sheffield, has made an assignment of his estate.

John Gare, jun., chemist and druggist, Winterbourne, Gloucester, has executed a deed of assignment. Trustee, Mr. J. A. Roper, wholesale druggist, 114, Redcliff Street, Bristol.

H. P. Sansam, chemist and druggist, Willenhall, Staffordshire, has assigned his estate to trustees, to pay a composition of 5s. in the pound, by two equal instalments, at fourteen days and three months from the registration of the deed.

Mr. James Robinson has taken the business of Mr. Edward Arnold, pharmaceutical chemist, Norwich.

GAZETTE.

BANKRUPTS.

ADAM, HARVEY H., Grafton-street, Mile-end-road, and Cannon-street-road St. George's-in-the-East, surgeon.

ATKINSON, HENRY, jun., Huddersfield, artificial manure manufacturer.

FOX, OSCAR HANGER, Albert-road, Abbey-road, St. John's-wood, surgeon.

GLASS, GEORGE MICHAEL, sen., Brandon-street, Locks-fields, Walworth, and Binfield-place, Stockwell, gelatine manufacturer.

JONES, W. E., Llanguidoch, Glamorganshire, chemist.

NAVILOR, WILLIAM, Worksop, chemist.

SAWERS, JOHN LE MARCHANT, Stratford St. Mary, Suffolk, veterinary surgeon.

SHAPLAND, JOHN, Chittlehampton, Devonshire, veterinary surgeon.

SMITH, EDWARD, Feteley-bridge, Yorkshire, chemist.

WRIGHT, THOMAS P., Watchet, Somersetshire, surgeon.

PARTNERSHIPS DISSOLVED.

CODD and Co., Coleman-street, cork merchants.

FITCH, S. H., and Co., Glasgow, manufacturers of congrue matches.

PAYNE, H., and BROWNING, G., Oughtibridge, Yorkshire, surgeons.

SCOTCH SEQUESTRATION.

DIVERTY, P., Kintore, Aberdeenshire, bachelor of medicine.

NON-INTERVENTION IN EMERGENCIES.—A correspondent of the *Times* animadverts upon the etiquette—law he hopes it is not—"which forbids any chemist to leave his shop, even to render assistance in the most urgent cases where a doctor's services cannot be obtained at a moment's notice." Referring to a sudden seizure of illness which terminated in the death of a lady, he says—"In the case to which I have alluded, no professional aid could be procured until too late to be available, although four medical men were summoned as early as possible. Two chemists in Oxford-street refused to do more than send for a doctor, notwithstanding they were informed of the pressing need of instant succour. Those around the unfortunate lady did all in their power in the hope of restoring her to consciousness, but unprofessional efforts must be uncertain and often misguided. It is the profession and business of a chemist and druggist to make and sell medicines, not to practise physic. He must needs know how to prepare sal-volatile, and he may have lancets to vend, but he may not know the difference between coma and syncope, and whether a person in a fit requires bleeding or a stimulant. He would render assistance at the peril of the patient, and also at his own. He has before his eyes the possibility of making a fatal mistake, and the horrible fear of a trial in a felon's dock, resulting, at the least, in ruinous law expenses consequent on a verdict of manslaughter, returned against him by a British jury, under the direction of a British coroner. 'Enforce responsibility,' that is a British maxim. Its necessary correlative, unfortunately, is 'Run no risk.'"



LONDON, JUNE 15, 1866.

CORRESPONDENCE.—All communications should be addressed to the Editor, at 24, BOW-LANE, E.C.; those intended for publication should be accompanied by the real names and addresses of the writers.

QUERIES.—The Editor cannot undertake to attend to those which are anonymous, or to send answers through the post.

SUBSCRIPTION.—The subscription to the CHEMIST AND DRUGGIST is 5s. per annum, payable in advance. Should a receipt be required, a stamped envelope must be sent with the amount of subscription. A specimen number may be had upon application, price 6d.

POST OFFICE ORDERS.—Post-Office Orders to be made payable at the General Post Office to the Publisher, JAMES FIRTH, who is alone authorized to receive accounts.

SCALE OF CHARGES FOR ADVERTISEMENTS.

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The CHEMIST AND DRUGGIST is published on the Fifteenth of every month, except when that date falls upon a Sunday, when it is published on the preceding day. It is regularly supplied direct to the Members of the Trade in Great Britain, Ireland, the Colonies, and all the principal seats of foreign commerce.

Everything intended for insertion in the current Month must be sent in before the 10th, except Employers' and Assistants' Advertisements, which will be received until 9 A.M. on the morning previous to publication.

THE CRISIS IN THE UNITED SOCIETY.

THE Executive Committee of the United Society of Chemists and Druggists, in its present incoherent state, may be compared with another executive body that has recently attracted much attention. It is a Circle, with at least two centres; a Brotherhood, divided by unfraternal feelings; an Administration, including two contentious factions. The Secretary at New Ormond-street, who represents the late Head Centre at New York, issues manifestoes warning certain members of the Society against the treachery of Mr. Wade and his friends; while these gentlemen, who represent the Fenian Senate, declare that they are honestly striving to attain the objects of the Society, and refuse to acknowledge their secretary as Head Centre. Hence there is discord where there should be harmony; and time and energy, which might be usefully expended in the discussion of important subjects, are wasted in profitless strife. Our parallel merely refers to the abnormal conditions of the governing bodies, for the gentlemen who conduct the business of the United Chemists bear no resemblance to the leaders of the Fenian Brotherhood.

The deplorable dissension in the Committee of the United Society is a subject that we would gladly avoid, as we know that the slightest reference to it in these columns is taken as evidence of personal feeling. We fear, however, that we should lose the confidence of our subscribers were we to refrain from expressing our opinions on a matter which concerns them all.

We do not know when the active members of the Committee and their Secretary first agreed to disagree, but we know that a printed circular, in which the former are virtually described as agents of the Pharmaceutical Society, was privately sent to certain chemists by the Secretary before the Annual Meeting in November last. There can be little doubt that this circular gave rise to the extraordinary resolution of the meeting "to maintain" Mr. Buott's "appointment to the Registrarship, or some such office, as a *sine qua non* in any arrangement affecting the interests of the Society." At all the meetings of the Executive Committee that have been held since the Annual Meeting, there have been stormy dis-

cussions between the Secretary, or his few supporters, and the majority of the members. We attended the December and January meetings, and are responsible for the reports. We kept away from the three subsequent meetings, for reasons that we need not explain; but we published the official reports supplied by Mr. C. F. Buott. The failure of our attempt to obtain a perfectly independent account of the last meeting is explained in the correspondence which we print in another column. We may state that we should not have sent a reporter if the Committee had not passed a resolution in December last inviting us to attend the meetings.

We shall be much surprised if the Secretary's conduct is approved by the General Meeting in July, for the private circular which he sent to his supposed friends proves him to be a dangerous agent of the Executive Committee. It is quite certain that Messrs. Wade, D'Aubney, Potter, Cawdell, King, and other old members, cannot work with him. Yet these gentlemen have been the principal supporters of the Society. Indeed, the Society may be said to have grown from the seed planted by Messrs. D'Aubney and Wade in the correspondence of the early numbers of this journal.

We cannot accept the preposterous theory that the Secretary is actuated solely by a desire to promote the welfare of chemists and druggists, while the gentlemen we have named are simply plotting to betray their professional brethren. Why should these gentlemen be suspected of treachery? What reward do they covet? If they merely want to enter the Pharmaceutical Society, they need not waste their time at the meetings in New Ormond-street. A royal road to membership is open to them as "chemists and druggists in business." Mr. Matthews, the learned President of the United Society, surely cannot covet the Pharmaceutical title; and all must admit that he has been one of the staunchest champions of the Society, and one of the most liberal contributors to the Benevolent Fund. Yet he, like Mr. Wade, is in favour of the united action of the two societies on the subject of legislation, and is strongly opposed to the Secretary's dictatorship.

The future success of the United Society depends upon the action of the General Meeting; and we sincerely hope that each motion will be calmly and fairly discussed. Past services must, of course, be taken into consideration; but the great objects of the meeting are to decide upon a line of policy, and to organize an effective administration.



IODIZED COTTON.

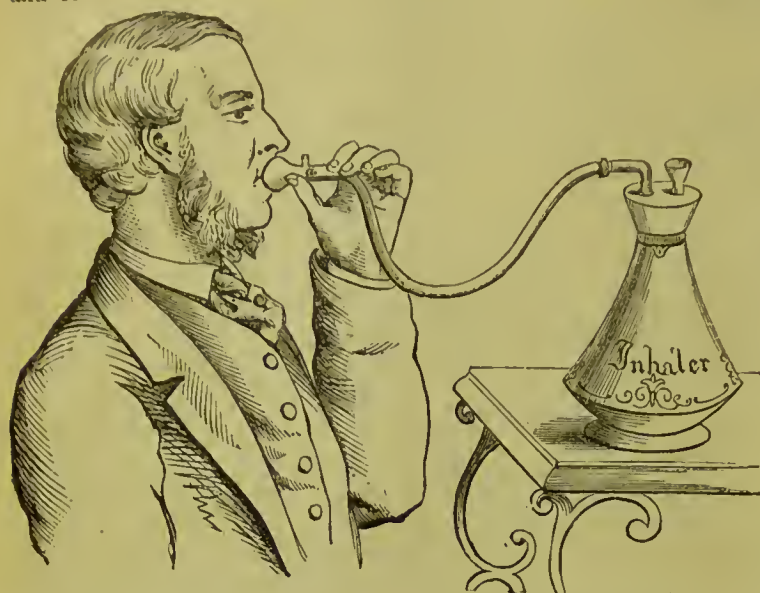
IN a recent number of the *Lancet* Dr. Greenhalgh gives full particulars respecting the "iodized cotton" which he employs in the treatment of certain uterine disorders. A sample of this cotton prepared by Messrs. Bell and Co., was exhibited at the Conversazione of the Obstetrical Society on the 29th of March, and attracted much attention.

It is made as follows:—Two ounces of iodide of potassium and one ounce of iodine are dissolved in eight ounces of glycerin, in which solution eight ounces of cotton wool are thoroughly saturated and then carefully dried. The best method of applying it is to take a portion of the iodized cotton about the size of a half-crown piece, secured by some silk thread tied crosswise, and, passing it through a speculum, to press it firmly against the cervix uteri, over which a piece of cotton wool similarly secured, somewhat larger, and freely saturated in glycerin, should be placed and retained *in situ* while the speculum is being withdrawn. It may be applied twice or three times a week, and be kept in the upper part of the vagina from twenty-four to forty-eight hours.

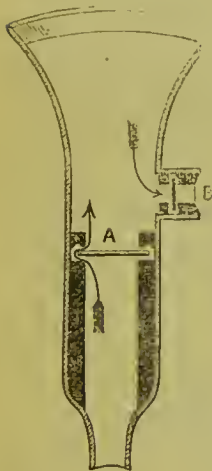
According to Dr. Greenhalgh it possesses the following advantages:—It is clean, light, and portable; it produces no irritation; destroys all fœtor; is considerably stronger than the compound tincture of iodine, is more readily absorbed, and can be kept in contact with the diseased tissues for a longer period. Moreover, it does not soil the linen like the medicated pessaries and suppositories and many other topical applications in general use for uterine affections.

DR. BEIGEL'S UNIVERSAL INHALER.

MESSRS. ROBBINS and Co. have lately introduced an elegant and convenient inhaler, devised by Dr. Beigel. It can be



used for inhaling oxygen or other gases, and all kinds of medicated vapours. It is represented in the above woodcut, and consists of a vase of fine porcelain, a cap fitted with two tubes, and a flexible delivery tube, furnished with a valved porcelain mouthpiece. The gases and vapours are generated in the vase by the action of boiling water upon certain powders or volatile liquids; oxygen being obtained from the "Patent Oxygenator" noticed below. The water may be poured down the long straight glass tube which serves to admit atmospheric air into the vase when a vapour is inhaled. The construction of the mouthpiece is explained by the section. The two self-acting valves (A and B) are made of vulcanite. When gas or vapour is inspired, the valve B is closed by the pressure of the external air, but at each expiration it opens while the valve A closes. Hence the expired air escapes into the atmosphere, and never passes into the vessel in which the gas or vapour is generated.



PATENT OXYGENATOR.

MESSRS. ROBBINS and Co. have given this name to a white powder, which yields pure oxygen when treated with boiling water. We believe that the evolution of oxygen depends upon the action of peroxide of cobalt on hypochlorite of calcium, as in Fleitmann's process for preparing the gas. Inhalations of oxygen have lately been employed with considerable success in the treatment of various diseases. Dr. Beigel, in his recent work on inhalation, reports a great number of cases of consumption, whooping cough, diphtheria, asthma, and bronchitis, in which they have afforded great relief; and Dr. Ramskill declares that most beneficial results have followed their application in cases of epilepsy and other nervous diseases.

PEROXIDE OF HYDROGEN.

ALTHOUGH this interesting compound was discovered by Thenard, nearly fifty years ago, it has only recently been introduced into medical practice. According to the experiments of Dr. Richardson, it is a very valuable agent in the treatment of cases of imperfect respiration and strumous disease. It is said to act like iodine in reducing glandular swellings; to relieve the difficulty of breathing in cases of

consumption and chronic bronchitis; and to enable the stomach to retain cod-liver oil. Messrs. Robbins and Co. are, we believe the only manufacturers of this remedial agent. Their "peroxide of hydrogen" is an aqueous solution of the strength which is found to be most convenient in use. The pure peroxide is a very unstable compound, and can never become an article of commerce.

DR. RICHARDSON'S PREPARATIONS OF ETHER.

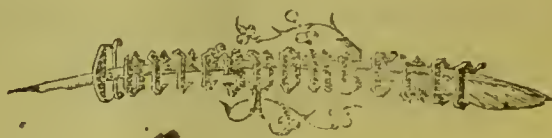
THESE preparations are the latest novelties introduced by Dr. Richardson and Messrs. Robbins & Co.

The Xylo-styptic ETHER is used with the spray tube, so that the effects of the styptic may be produced with constringent effects of extreme cold. The spray produces rapid congelation, even of defibrinated blood. It also arrests the decomposition of blood.

The OZONIC ETHER contains ozone, and diffused from a spray tube in the sick room, or allowed to evaporate from a linen cloth, rapidly fixes ammoniacal compounds and deodorizes the air. It may also be inhaled from a pocket-handkerchief in quantities of one or two teaspoonfuls, in cases where the medical practitioner sees its applicability.

The preparation called IODIZED ETHEREAL OIL is composed of iodine, absolute ether, and pure oil. It is said to form a good dressing for recent wounds

or incisions, and to be especially applicable for suppurating or open surfaces in which there is a fetid discharge. It may be applied directly by a camel's hair pencil. Lint saturated with this solution and applied to the affected surface, if excluded from the air, does not adhere, and may be readily removed without giving pain.



UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Sir,—I am ordered by the Executive Committee of the United Society of Chemists and Druggists, to announce in the columns of the CHEMIST AND DRUGGIST Journal that the ANNUAL MEETING of the Society will be held at 2 o'clock P.M., on THURSDAY, the 19th July, at the Society's Offices, 20, New Ormond Street, W.C., London.

Business of pressing importance will be brought under consideration, and it is very desirable that every district in the Society and every important town should be represented on the occasion.

I am, Sir, your obedient servant,

CYRUS BUOTT,

Registrar and Secretary of the United Society of Chemists and Druggists.

20, New Ormond Street, June 9th, 1866.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

My dear Sir,—It is with some regret that I have to inform you of my inability to supply you with a report of the proceedings of the United Society of Chemists and Druggists on Thursday. I presented myself in due time and course at 20, New Ormond Street, and the moment I entered the room I perceived I was to be a bone of contention. I received general information that an objection would be raised to my stopping, but considered I had better await the result of the debate upon the question. The chair was taken at about 10 minutes to 3, when I, following a course I invariably pursue when any discussion personal to myself or to my order arises, at once withdrew into an adjoining room. I there waited until very nearly half-past three, having during my lengthened stay pretty often caught the sound of warm debating. Under these circumstances I came to the conclusion that I should best uphold the dignity of the CHEMIST AND DRUGGIST by withdrawing from the premises, and did so, after writing a note

to the Committee. I feel assured that you will agree with me that I could not possibly have done justice to either side had I been admitted, under all the peculiar circumstances of the case, and I must say that the Committee of the United Society might have shown some regard and courtesy to the member of a profession which is, as a rule, always treated with respect. I confess that I felt annoyed at being unceremoniously kept in suspense while a number of gentlemen "laboured at elegance," and I trust you will not think I have acted inconsistently in the matter. With many thanks for past favours,

I am, yours faithfully,
W. J. Rossi.

5, Haberdasher's Street, Hoxton, June 8th, 1866.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Sir,—With reference to the Executive Committee meeting of this Society held here yesterday, I have to inform you that the gentleman you sent to act as reporter duly presented the letter of introduction, but was informed that there might be some difference of opinion expressed as to the expediency of his performing this duty. He was also requested to consider the discussion to involve no personal objection, but simply a question raised as to the expediency of a reporter being present at all the meetings of the Society. Upon his own suggestion he retired during the debate upon this matter, and left before the question was settled, leaving a message to the effect that as there appeared to be so much difference of opinion as to the necessity of his being there at all, that he preferred leaving.

I have further to state that if you have no objection, I purpose, on the request and behalf of the Secretary, to forward you the usual official summary of all the proceedings of the meeting that affect the general interests of the members, and wait your reply, which, as time presses, I shall be glad to receive at your earliest convenience.

Should you deem it necessary, I will endeavour to procure the signature of the chairman of the meeting in confirmation, as you have before required; and although in such a case I may feel sorry that I am not favoured with your confidence as to my truthfulness and impartiality, I trust you will admit my willingness to lay aside my personal feelings in order to promote the interests of the Society, and the requirements of the readers of your journal. In conclusion, I may remind you that the Secretary's report of the Committee meetings, until recently, have been sent and received without any question in accordance with all official usage. Waiting the favour of your reply,

I am, Sir, yours obediently,
For my father, Registrar and Secretary,
C. F. BUOTT.

United Society of Chemists and Druggists,
20, New Ormond Street, W.C., June 8th, 1866.

[We subjoin a copy of our reply: "The Editor of the CHEMIST AND DRUGGIST presents his compliments to Mr. C. F. Buott, and begs to inform him that he shall be glad to publish the Resolutions passed by the Executive Committee of the United Society, with the names of the proposers and seconders; but that he does not think it would be expedient at present, to print any official notes of the discussions."]

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Sir,—The Annual Meeting of the United Society is fixed for the 19th of July, and as the future welfare of the institution greatly depends upon the result of that event, I avail myself of the privilege which you offer to every one in common who desires to address his fellow members, and express his ideas upon trade matters.

It has only within the last few weeks come to my knowledge, that previous to the general meeting held in November, 1865, a circular of a most unwarrantable character was secretly distributed among certain members, requesting their attendance for a specific purpose, whilst the majority had no direct intimation even that a meeting was to be held. I know not whether the same course will be pursued this year, but my experience of the past six months, on committee leads me to infer that every effort will be made to procure an adverse vote to the re-election of the present members of the Executive, as well as to their pacific policy for incorporating the trade in a friendly spirit with existing institutions.

It is quite impossible that the Society can continue, unless a decided alteration is effected between the Executive Committee and its officers. The dead lock to which it is now come, which prevents the festival being held, will lead to its destruction, unless means are devised for giving authority to the Executive to carry out the wishes of members generally.

A scandalous attempt is being made to cast suspicion upon the original founders of the Society, and to poison the minds of members against them by insinuating that, for commercial and other purposes, they are willing to sacrifice the interests of outsiders to pharmaceutical dominations. This fabrication, as base as it is false, is deserving of the utmost contempt, and will be proved by the printed secret circular which I intend to lay before the Committee at their next meeting.

Having been associated with every act which has raised the Society to its present position, and being responsible to some extent as to its future, I cannot but entertain great fears, when I find the power which should be in the elected committee is usurped by an uncontrollable official. The committee, consisting of about twenty members, representing the true interests of chemists and druggists, and appointed not many months since, have been *almost unanimous* in its desire to advance the interests of non-pharmaceutists in a reasonable progressive manner; but the small minority, entertaining different views, have created a confusion fatal to any good understanding. I appeal to my fellow-members through your columns, as it is the only means of counter-acting the secret influence which has been used against myself and the gentlemen with whom I am associated. I ask the members of the Society to make a special purpose in attending the Annual Meeting, to express their determination to free themselves from dictation, and to make the Society subservient to the wants of the trade, and not to individuals in particular.

At the first meeting of the Society I moved a resolution to the effect "that none but *bonâ fide* chemists or druggists be eligible for election to the Executive Committee;" the resolution on that occasion was lost by two votes; it is my intention to press it before the next meeting of the members, and I hope this time with better success.

I am, Sir, yours obediently, JOHN WADE.

LEGAL DEFENCE ASSOCIATION.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Sir,—Referring to your article in the May number, we can, of course, have no objection to the chemists of Bordeaux making a little fun of us, and also settling with their own Government the restrictions to be imposed upon them. This is no affair of ours, but it rests upon me to disabuse the minds of the trade in this (as they think) dangerously free country, that should any one of us presume upon the strength of our LEGAL DEFENCE ASSOCIATION to become reckless of consequences, and so poison and injure his customers, that he will not (as the Frenchman pretends) find that when his costs and damages are paid that here is no other matter for his solicitude.

The next thing for his consideration is this: will his customers in future have sufficient confidence in him to continue their support? If he is clearly the victim of accident they most probably will; but if he is of the character that our Frenchman supposes, he will not be able to remain in the same town, and, judging from known cases, his very house may become untenable to a Chemist.

In one or two of these cases no person could afterwards carry on the drug trade in the shop which the offender had once occupied on account of the odium which had been incurred.

I am, Sir, yours truly,

Rochester, June 6th. HENRY BARNABY.

P.S.—I should like to take this opportunity to inform my friends and adherents that above a hundred more promises of membership for our proposed Society have been obtained within the last few months, and that we hope to start soon.

A SUGGESTION FOR UNITED ACTION.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Sir,—In common with your correspondent, Mr. Wade, I have observed with great satisfaction the development of a liberal policy in the recent transactions of the Pharmaceutical Society. This friendly feeling of the President and many members of the Council towards "outsiders" ought to be

warmly reciprocated, not only by the United Society, but by the great body of the trade. We are now drawing very near to a period when the united action of both Societies will be imperatively necessary to secure a measure from Government that will be worth the acceptance of the whole trade. We that will be worth the acceptance of the whole trade. We may rest assured that the medical profession will not fail to look after their own interests during the progress of such a Bill through Parliament. It appears to me that by the mutual concession of minor differences, the two Societies might be brought to work heartily for the benefit of the whole trade at such a critical juncture. My intercourse with the Pharmaceutical body enables me to state that they are very anxious that some such conciliatory measure should be adopted. I see by your last number that the Committee of the United Society have sent an official communication to the Pharmaceutical Society, respecting the friendly letter of their President to Mr. Matthews. This, I think, they will find to be a mistake, and I should not be surprised to hear that they have not been favoured with a reply. To follow up a letter, written for the purpose of creating a better feeling, with an official document, which may be characterised as an admirable specimen of circumlocution, is certainly going the way to defeat the very object in view. Allow me to suggest, through your columns, that some such plan as the following be adopted:—Let the Pharmaceutical and the United Societies each appoint six representatives—the President in each case to be of the number,—let them meet, and confer upon the various points at issue. Care should be taken that everyone nominated be a representative man, and competent to give expression to the views of some section of the trade. To ensure some practical good from such a conference, let the result of their deliberations be embodied in a series of resolutions, to be submitted to an aggregate meeting of both Societies.

In conclusion, allow me to thank you, Mr. Editor, for so liberally placing at my service your columns for the insertion of any suggestions which may occur to me,—a privilege which I shall probably make use of occasionally.

Manchester, June 5, 1866. Yours truly, MONEO.

EARLY CLOSING.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—Having read the several letters on the subject of early closing, I take the liberty of making a suggestion.

Being the close of the season in London, surely the next few months is the time for action. All who have read the letters from masters on this subject, contained in your valuable journal, admire the feeling exhibited in favour of the early closing movement, and at the same time sympathise with the difficulties to be encountered from the insincerity of others in the trade; then the question is "What's the best mode of action?"

I suggest calling a meeting of the principal chemists in London to consider in open discussion this important subject, and then I feel certain that arrangements may be made by which masters as well as assistants may obtain an hour's recreation after the harassing duties of the dispensing counter.

Judging from my own feelings on the subject, I feel certain that ere long something must be done. If things go on as at present there will be no assistants left in a few years' time. The difficulty in getting apprentices was never so great as at present, and assistants are daily turning their backs on a business that ties them from morning till night without reasonable cessation.

For my own part, I am engaged with a master who, I am certain, would be the first to get the shutters up at an earlier hour, if others in the neighbourhood would do likewise; but, under present circumstances, we are behind the counter from 7-30 a.m. till 10 p.m., and till past midnight on Saturdays. Then on Sunday morning and evening we are engaged in supplying medicines, most of which might have been obtained on Saturday.

What we want is unity. I have too much respect for my employer to expect him to close while other doors are open to receive his customers; but if we unite and boldly face the difficulty, I feel certain of our success.

But the important question is "Who's to bring this about—employers or assistants?" I say most certainly the masters. For my part I despise anything like a strike, and cannot think that a body of men of education could entertain

the idea. If masters will not take the lead, then let us as assistants be united, and see what can be done for the benefit of the trade.

For some time I have been trying to read for the Pharmaceutical examinations, but when the day's work is over, I find my energies are exhausted, and only open the book to shut it again in despair, and retire to rest to recruit my strength for another long day's exertions. So it is evident to me that the best means of getting qualified assistants, and those that will serve their employers well, is to bring about a movement that will give them a little time for recreation and study. Thanking you, Mr. Editor, for the kind publicity you have given to former letters on this subject,

I remain, yours obliged,
SERVUS.

June 9th, 1866.



MAGGOTS EATING TIN-FOIL.

The following letter has been sent to us, with a sheet of stout tin-foil curiously perforated:—

"Dear Sir,—Some time ago I rolled a quantity of tin-foil on a wooden cylinder. On examining it a few days ago, I found that a number of maggots had issued from the wood, and after boring their way through the numerous folds of foil and the paper in which it was wrapped, had disappeared (probably to assume the *imago* state). I cut into the wood, and succeeded in disintering a couple of the worms—small white maggots, about three-sixteenths of an inch in length. Every sheet of the foil was riddled.—Yours, etc., G. J. R.—Alnwick, June 6, 1866."

"*Rufus*."—The following for mule gives a good blood-red colour:—Iodine and iodide of potassium, of each, ʒij.; triturate with ʒj. of water; and add Cijj. of water, and ʒiv. of hydrochloric acid.

"*Chemicus*" (Devonport).—See our last volume, pp. 46 and 158.

G. (Liverpool).—A license is required.

BOOKS RECEIVED.

The Druggist's General Receipt Book. By HENRY BEASLEY. Sixth edition. John Churchill & Sons.

The Toilet and Cosmetic Arts. By ARNOLD J. COOLEY. Robert Hardwicke. Pp. 810.

A Dictionary of Chemistry, etc. By HENRY WATTS, B.A. Part XXXIV. Potassium—Pyruvic Acid. Longmans.

The platinum boiler exhibited by Messrs. Johnson and Matthey at the recent Pharmaceutical Conversation was thus described:—"Platinum Boiler for concentrating Sulphuric Acid; value complete, with syphon, £2,600, capable of producing half a ton to 10 tons of concentrated acid per diem. Soldered by the patent autogenous process (*i.e.* with platinum) saving extra expense of gold."



The financial panic, together with the uncertain state of political affairs on the continent, have continued to have a depressing influence on the market for all kinds of chemicals, and the latest business done has been at prices in favour of the buyers. Tartaric Acid, however, is now more in demand at the reduced rates of 1s. 4½d. to 1s. 4¾d. Citric Acid is slow at 1s. 11d. to 2s. Oxalic, in retail lots, sells at 12d. More business doing in Chlorate at 14d. Salts of Sorel is quiet at 14d. Bichromate is dull at 5½d. to 6d., and Prussiate of Potass at 13d. to 13½d. Iodine is rather easier, and only a small business doing at 7½d. to 7¾d. for firsts. A good business has been done in French Quinine at 4s. 8d., and at the close there are rather free sellers at this price. English is quiet at 5s. 1d. Sulphate of Copper is dull and lower, sales being now made at 25s. for second quality. Soda Crystals are dull and lower, last sales made at 107s. 6d. Ash is also cheaper, business being done at 2½d. ex. ship. Cream of Tartar is

lower, some sales rather under first-class being made at 85s., 87s. 6d., and 90s. Bicarbonate of Soda is quiet at 18s. to 18s. 6d. Caustic at 18s., 19s., and 70 per cent. 24s. to 24s. 6d., both being rather lower. Alum is rather dearer, sales made at £7 15s., and lots £8. Sulphate of Ammonia is quiet at 11s. 6d. to 12s. Flour of Brimstone 13s., and Roll 10s. to 10s. 6d. A good business has been done in Bleaching Powder at 16s. 6d. to 17s. 6d. Turpentine is lower, French is now 44s. to 45s. Some American has been sold at 47s. 6d. A few lots of American Rough has been sold at 11s. 6d. for export. Refined Saltpetre is steady at 27s. to 27s. 6d. Linsced Oil is rather better at the close, spot is now 36s. to 36s. 3d. Hull month 36s. Rape is easier, business done in English Brown, spot and forward, at 40s. 6d. to 41s. Petroleum is dull and nominal at 2s. 2d., supplies are coming in more freely. In other articles scarcely any business has been done.

In the Drug market business has been confined to the mere wants of the trade, but for export scarcely any sales are reported. Cubebs have sold at rather advanced prices. Castor Oil is $\frac{1}{4}$ d. dearer. Oil Anniseed is now 9s. 3d., which is rather better. Some parcels of Oil Cassia have been sold at 7s. 3d. Citronelle is $3\frac{1}{4}$ d. to 4d. for common, being rather cheaper. Camphor is dull at 120s. Cod-liver Oil has been sold at 4s. 6d. to 5s. 6d. for fair and good. Cape Aloes are rather lower. Shellac is 2s. 6d. to 5s. cheaper. Bark is without change. Bees Wax is 10s. to 20s. cheaper, owing to better supplies. Star Anniseeds are lower. Gums are without change. Balsam Capivi is rather easier. China Root is rather cheaper. Tinnivelly Senna is held for better rates. Gums are less in demand, but full prices asked. Gambier is 21s., and quieter. Cutch dull, and rather easier. Galangal Root is 1s. to 2s. lower. Ipecacuanha has been sold at 14s., but more sellers now at this price. Jalap is without change. In other goods business is almost suspended.

PRICE CURRENT.

These quotations are the latest for ACTUAL SALES in Mincing Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the CASH PRICES IN BULK. They will, however, be able to form a tolerably correct idea of what they ought to pay.

	1866. s. d.	1866. s. d.	1865. s. d.	1865. s. d.
ARGOL, Cape, per cwt.	70 0	85 0	30 0	97 6
French	58 0	70 0	60 0	85 0
Oporto, red	40 0	43 0	45 0	47 0
Siely	70 0	72 6	72 6	75 0
Naples, white	63 0	73 0	68 0	76 0
Florence, white	87 6	92 6	85 0	90 0
red	78 0	80 0	80 0	85 0
Bologna, white	87 6	90 0	90 0	95 0
ARROWROOT, (duty $\frac{1}{4}$ per cwt.)				
Bermuda, per lb.	1 2	1 5	1 0	1 6
St. Vincent	0 2 $\frac{1}{2}$	0 6	0 2 $\frac{1}{2}$	0 6 $\frac{1}{2}$
Jamaica	0 3	0 5	0 3 $\frac{1}{2}$	0 6
Other West India	0 2 $\frac{1}{2}$	0 3 $\frac{1}{2}$	0 1	0 3
Brazil	0 2 $\frac{1}{2}$	0 3	0 2 $\frac{1}{2}$	0 3
East India	0 2 $\frac{1}{2}$	0 3 $\frac{1}{2}$	0 2 $\frac{1}{2}$	0 3 $\frac{1}{2}$
Natal	0 3 $\frac{1}{2}$	0 8	0 4	0 8 $\frac{1}{2}$
Sierra Leone	0 3 $\frac{1}{2}$	0 4	0 3 $\frac{1}{2}$	0 4 $\frac{1}{2}$
ASHES, per cwt.				
Pot, Canada, 1st sort	35 6	0 0	31 0	0 0
Pearl, ditto, 1st sort	38 6	39 0	31 0	31 6
BRIMSTONE,				
rough, per ton	135 0	0 0	150 0	0 0
roll	200 0	0 0	195 0	215 0
flour	240 0	250 0	245 0	250 0
CHEMICALS,				
Acid—Acetic, per lb.	0 4	0 0	0 4	0 0
Citric	1 11	2 0	1 10 $\frac{1}{2}$	1 11
Nitric	0 5	0 5 $\frac{1}{2}$	0 5	0 5 $\frac{1}{2}$
Oxalic	1 0	0 0	0 9 $\frac{1}{2}$	0 10
Sulphuric	0 0 $\frac{1}{2}$	0 1	0 0 $\frac{1}{2}$	0 0
Tartaric crystal	1 4 $\frac{1}{2}$	1 4 $\frac{1}{2}$	1 6	1 6 $\frac{1}{2}$
powdered	1 5 $\frac{1}{2}$	0 0	1 6 $\frac{1}{2}$	1 7
Alum	150 0	160 0	140 0	145 0
powder	170 0	0 0	160 0	0 0
Ammonia, Carbonate, per lb.	0 5	0 5 $\frac{1}{2}$	0 5	0 5 $\frac{1}{2}$
Sulphate	230 0	250 0	260 0	280 0
Antimony, ore	180 0	190 0	165 0	170 0
crude	24 0	25 0	24 0	25 0
regulus	35 0	0 0	34 0	35 0
French star	34 6	35 0	35 0	0 0
Arsenic, lump	15 6	0 0	15 0	15 6
powder	7 6	0 0	6 3	6 6
Bleaching powder	16 6	17 0	10 0	10 6
Borax, East India refined	0 0	0 0	0 0	0 0
British	65 0	0 0	54 0	55 0
Calomel	2 5	0 0	2 8	0 0
Camphor, refined	1 6	1 6 $\frac{1}{2}$	1 6	0 0
Copperas, green	56 0	60 0	52 6	55 0
Corrosive Sublimate, per lb.	1 11	0 0	2 3	0 0
Green Emerald	0 0	0 0	0 0	0 0
Brunswick, per cwt.	0 0	0 0	0 0	0 0

	1866. s. d.	1866. s. d.	1865. s. d.	1865. s. d.
CHEMICALS.				
Iodine, dry	0 7 $\frac{1}{2}$	0 7 $\frac{1}{2}$	0 6 $\frac{1}{2}$	0 6 $\frac{1}{2}$
Magnesia, Carbon	42 6	45 0	42 6	45 0
Calcined	1 6	1 3	1 6	1 8
Minium, red	22 0	22 6	21 6	24 6
orange	32 6	0 0	32 6	33 0
Potash, Bichromate	0 5 $\frac{1}{2}$	0 6	0 6	0 6 $\frac{1}{2}$
Chlorate	1 1 $\frac{1}{2}$	1 2	0 0	1 1
Hydriodate	0 7	0 7 $\frac{1}{2}$	0 6	0 6 $\frac{1}{2}$
Prussiate	1 1	1 1 $\frac{1}{2}$	0 11 $\frac{1}{2}$	0 11 $\frac{1}{2}$
red	1 9 $\frac{1}{2}$	1 10	1 9	1 9 $\frac{1}{2}$
Procipitate, red	0 0	2 6	2 9	0 0
white	0 0	2 5	2 9	0 0
Prussian Blue	1 0	1 10	1 0	1 10
Roso Pink	29 0	0 0	29 0	0 0
Sal-Acetosa	1 2	0 0	0 11 $\frac{1}{2}$	0 11 $\frac{1}{2}$
Sal-Ammoniac				
British	35 6	37 6	35 6	37 6
Salts, Epsom	8 6	9 6	9 0	0 0
Glauber	5 0	6 0	5 0	5 6
Soda, Ash	0 2 $\frac{1}{2}$	0 0	0 2 $\frac{1}{2}$	0 2 $\frac{1}{2}$
Bicarbonate	18 0	19 0	11 0	11 6
Crystals	110 0	0 0	97 6	100 0
Sugar Lead, white	38 0	39 0	37 0	37 6
brown	27 0	0 0	26 0	27 0
Sulphate Quinine				
British, in bottle	5 1	0 0	6 0	0 0
Foreign	4 8	0 0	5 7	5 9
Sulphate Zinc	0 0	0 0	14 6	15 0
Verdigris	0 11	1 0	0 11	1 0
Vermilion, English	2 9	3 0	2 11	3 3
China	0 0	3 9	2 6	0 0
Vitriol, blue or Rom.	25 0	26 0	27 0	27 6
COCHINEAL, per lb.				
Honduras, black	3 2	4 6	3 2	4 5
silver	2 0	3 7	2 8	3 5
Mexican, black	3 2	3 5	3 2	3 5
silver	3 0	3 2	2 10	3 0
Lima	0 0	0 0	0 0	0 0
Tencriffe, black	3 4	4 2	3 0	3 9
silver	3 0	3 4	3 1	3 3
DRUGS,				
Aloes, Hepatic	100 0	170 0	100 0	200 0
Socotrine	140 0	290 0	160 0	290 0
Cape, good	36 0	39 0	42 0	44 0
inferior	20 0	35 0	25 0	40 0
Barbadoes	50 0	280 0	60 0	300 0
Ambergris, grey	24 0	30 0	22 0	24 0
Angelica Root	20 0	35 0	20 0	35 0
Aniseed, China star	90 0	100 0	145 0	0 0
German, &c.	26 6	40 0	24 0	40 0
Balsam, Canada	1 4	1 5	0 10	0 0
Capivi	1 10	2 0	2 2	2 3
Peru	5 3	5 6	4 8	4 9
Tolu	2 8	2 9	3 4	0 0
Bark, Cascarilla	20 6	29 0	27 0	36 0
Peru, crown & grey	1 2	2 2	0 8	2 0
Calisaya, flat	2 6	2 9	2 10	3 4
quill	1 10	2 3	2 4	2 10
Carthageana	1 0	1 4	2 3	2 9
Pitayo	0 9	2 6	1 0	2 3
Red	2 6	13 0	3 0	11 0
Bay Berries	0 0	0 0	0 0	0 0
Bucca Leaves	0 5	0 11	0 4	0 10
Camomile Flowers	30 0	105 0	20 9	65 0
Camphor, China	117 6	120 0	115 0	117 6
Canella alba	6 0	0 0	23 0	33 0
Cantbarides	2 4	0 0	2 2	2 3
Cardamoms, Malabar, good	5 3	6 6	6 3	7 0
inferior	3 6	5 6	4 3	5 9
Madras	2 9	5 8	3 0	5 9
Ceylon	3 0	3 9	4 0	5 3
Cassia Fistula	15 0	33 0	30 0	43 0
Castor Oil, 1st pale	0 6 $\frac{1}{2}$	0 8	0 6 $\frac{1}{2}$	0 6 $\frac{1}{2}$
2nd	0 0	0 6 $\frac{1}{2}$	0 5 $\frac{1}{2}$	0 6 $\frac{1}{2}$
inferior and dark	0 5 $\frac{1}{2}$	0 5 $\frac{1}{2}$	0 4 $\frac{1}{2}$	0 5
Bombay, in casks	0 5 $\frac{1}{2}$	0 6	0 4 $\frac{1}{2}$	0 4 $\frac{1}{2}$
Castorum	1 0	20 0	1 0	20 0
China Root	20 0	35 0	20 0	22 6
Cocculus Indicus	30 0	40 0	25 0	27 0
Cod Liver Oil	3 6	6 3	5 0	10 0
Colocynth, apple	0 7 $\frac{1}{2}$	1 2	0 7	1 1
Colombo Root	160 0	220 0	160 0	210 0
Cream Tartar				
French	90 0	0 0	102 6	105 0
Venetian	95 0	0 0	105 0	107 6
grey	85 0	87 6	92 6	95 0
brown	87 6	0 0	85 0	92 6
Croton Seed	300 0	420 0	90 0	95 0
Cubebs	77 6	85 0	82 6	85 0
Cumin Seed	16 0	22 0	19 0	23 0
Dragon's blood roed	300 0	400 0	200 0	300 0
lump	105 0	280 0	70 0	260 0
Galangal Root	9 6	10 6	16 0	17 0
Gentian Root	16 0	18 0	21 0	22 0
Guinea Grains	85 0	87 6	80 0	85 0
Honey, Narbonne	50 0	70 0	40 0	80 0
Cuba	26 0	35 0	25 0	33 0
Jamaica	32 0	61 0	25 0	60 0
Ipecacuanha	13 6	14 0	10 4	10 6
Isinglass, Brazil	2 2	5 4	1 8	4 6
East India	1 6	4 4	1 0	4 0
West India	3 9	4 2	3 0	3 3
Russian	7 6	10 0	8 0	10 0
Jalap	9 9	5 3	1 0	5 3

DRUGS—continued.

	1866.	1866.	1865.	1865.
	s. d.	s. d.	s. d.	s. d.
Juniper Berries . . . per cwt.	8 6	10 0	7 0	0 0
Gormau and French . .	9 6	10 0	9 0	10 0
Italian	0 0	0 0	0 0	0 0
Lemon Juice	75 0	80 0	75 0	80 0
Liquorice	55 0	75 0	55 0	70 0
Spanish	2 6	3 0	2 0	2 6
Italian	1 2	1 8	1 2	1 4
Manna, flaky	18 0	36 0	22 0	33 0
small	20 0	22 0	12 0	14 6
Musk	13 6	14 6	18 0	14 0
Nux Vomica	5 0	7 0	0 0	0 0
Ophim, Turkey	24 0	86 0	29 0	31 0
Egyptian	0 0	0 0	3 0	0 0
Orris Root	135 0	145 0	65 0	0 0
Pink Root	0 4	1 2	0 5	1 1
Quassia (bitter wood) per ton	2 6	12 6	3 6	9 0
Rhatany Root	2 6	10 0	3 0	7 6
Rhubarb, China, round . .	12 0	14 0	10 0	11 0
flat	15 0	16 0	12 0	14 0
Dutch, trimmod	36 0	38 0	31 0	33 0
Russian	115 0	130 0	170 0	180 0
Saffron, Spanish	1 0	1 4	1 0	1 4
Salep	0 11	1 1	0 11	1 1
Susaparilla, Lima	0 9	1 7	0 10	1 7
Para	1 1	2 3	1 1	2 3
Honduras	10 6	11 0	15 0	16 0
Jamaica	30 0	44 0	30 0	35 0
Sassafras	14 0	23 0	12 0	23 0
Scammony, virgin	3 6	3 0	2 10	3 0
second	0 0	0 0	0 0	0 0
Seneca Root	0 4	0 5	0 4	0 5
Senna, Calcutta	0 4	0 10	0 4	0 10
Bombay	0 4	0 10	0 4	0 10
Tinnevely	0 3	0 9	0 3	0 9
Alexandria	0 0	0 0	4 0	4 8
Snake Root	0 0	1 2	0 0	1 1
Spermoceli, refined . . .	0 2	0 4	0 1	0 3
Squills	48 0	56 0	16 6	17 6
Tamarinds, E. India, per cwt.	16 0	83 0	10 0	22 0
West India				
Terra Japonica—				
Gambier	21 0	28 6	21 0	27 0
Catch	26 0	30 0	20 0	29 6
Valerian Root, English . .	20 0	29 0	20 0	30 0
Vanilla, Mexican	4 0	18 0	20 0	30 0
Wormseed	0 0	0 0	10 0	0 0
GUM—Ammonia, drop, per cwt.	120 0	170 0	120 0	170 0
lump	40 0	85 0	40 0	85 0
Animi, fine pale	210 0	270 0	210 0	220 0
bold amber	190 0	220 0	190 0	210 0
medium	160 0	180 0	160 0	180 0
small and dark	100 0	150 0	100 0	155 0
ordinary dark	40 0	97 0	40 0	95 0
Arabic, E. I., fine pale picked	85 0	95 0	82 0	90 0
unsorted, good to fine . .	72 0	80 0	64 0	76 0
red and mixed	50 0	70 0	46 0	60 0
sittings	35 0	45 0	25 0	40 0
Turkey, picked, good to fine	170 0	215 0	130 0	168 0
second and inferior . . .	95 0	160 0	65 0	120 0
in sorts	46 0	70 0	32 0	50 0
Gedda	52 0	55 0	39 0	40 0
Barbary, white	85 0	90 0	68 0	70 0
brown	70 0	80 0	40 0	45 0
Australian	50 0	56 0	30 0	40 0
Assatetida, fair to good . .	40 0	85 0	29 0	60 0
Benjamin, 1st quality . . .	840 0	000 0	550 0	950 0
2nd	240 0	300 0	440 0	500 0
3rd	50 0	240 0	80 0	940 0
Copal, Angola, red	80 0	90 0	79 0	80 0
pale	85 0	95 0	80 0	80 0
Benguella	67 6	90 0	55 0	80 0
Sierra Leone	0 4	0 11	0 3	0 10
Manilla	26 0	50 0	24 0	33 0
Dammar, pale	52 6	60 0	38 0	47 0
Galbanum	200 0	210 0	160 0	170 0
Gamboge, picked, pipe . . .	400 0	460 0	250 0	300 0
in sorts	230 0	400 0	140 0	240 0
Guaiacum	0 0	2 0	0 10	1 6
Kino	300 0	500 0	300 0	500 0
Kowrie	30 0	75 0	23 0	46 0
Mastic, picked	13 0	0 0	8 6	9 6
Myrrh, gr. and fine, per cwt.	130 0	160 0	130 0	180 0
sorts	70 0	110 0	70 0	130 0
Oilbanum, pale drop . . .	70 6	77 6	70 0	82 0
amber and yellow	55 0	70 0	65 0	68 0
mixed and dark	23 0	48 0	16 0	44 0
Senegal	87 6	100 0	70 0	95 0
Sanchar	90 0	110 0	77 6	100 0
Tragacanth, leaf	200 0	280 0	180 0	260 0
in sorts	70 0	180 0	80 0	100 0
OILS—continued.				
Seal	46 0	52 0	42 0	0 0
Sperm, body	122 0	123 0	90 0	02 0
Cod	46 0	0 0	51 0	0 0
Whale, Greenland	0 0	0 0	0 0	0 0
South Sea, pale	46 0	48 0	44 0	44 10
East India Fish	35 0	0 0	30 0	0 0
Olive, Calipoli	59 0	0 0	61 0	0 0
Flourenco, half-chest . .	0 0	0 0	0 0	0 0
Cocanut, Cochin	53 0	0 0	43 6	44 6
Ceylon	44 0	0 0	43 0	0 0
Sydney	40 0	43 6	36 0	41 0
Ground Nut and Gln . . .				
Bombay	59 0	0 0	88 0	0 0

OILS—continued.

	1866.	1866.	1865.	1865.
	s. d.	s. d.	s. d.	s. d.
Madras	53 0	54 0	36 6	27 0
Palm, fine	39 0	40 0	36 0	36 0
Linseed	86 0	83 6	31 6	32 0
Rapeseed, English, pale . .	43 0	0 0	43 0	41 0
brown	40 0	0 0	42 0	0 0
Foreign pale	43 6	0 0	44 6	0 0
brown	49 6	0 0	42 0	42 0
Lard	73 0	75 0	60 0	0 0
Tallow	30 0	0 0	38 0	0 0
Rock Crude	£17 0	0 0	£19 0	£ 0 0
Oils, Essential—				
Almond, essential	89 0	0 0	0 0	0 0
expressed	1 8	0 0	0 10	0 0
Anised	9 3	0 0	7 6	7 7
Bay	90 0	0 0	0 0	0 0
Bergamot	9 0	13 0	0 0	14 6
Cajeputa, (in bond)	0 2	0 3	0 2	0 0
Caraway	5 0	6 6	5 6	6 6
Cassia	7 0	7 3	8 0	8 3
Cinnamon (in bond)	1 6	3 9	1 0	8 2
Cinnamon Leaf	0 4	0 6	0 0	0 8
Citronel	0 2	0 5	0 4	0 4
Clove	2 8	0 0	0 0	0 0
Croton	1 2	1 0	1 0	1 8
Juniper	1 0	2 0	2 0	2 6
Lavender	2 0	3 3	1 6	3 6
Lemon	6 6	8 0	7 6	9 0
Lemongrass	1 4	1 6	1 7	1 8
Mace, ex	0 1	0 2	0 1	0 2
Neroli	3 6	4 0	5 0	7 0
Nutmeg	0 3	0 8	0 1	0 3
Orange	5 0	8 0	5 6	6 6
Otto of Roses	10 0	23 0	18 0	22 6
Peppermint, per lb.	15 6	16 0	13 6	14 0
Americau	30 0	33 0	0 0	0 0
English	0 0	0 0	0 0	0 0
Rhodium	0 0	0 0	0 0	0 0
Rosemary	1 9	2 0	2 0	2 3
Sassafras	5 0	0 0	3 3	3 6
Spoarmint	26 0	23 0	0 0	0 0
Spike	0 0	0 0	0 0	0 0
Thyme	1 10	2 0	1 9	2 0
PITCH, British	12 0	2 0	12 0	0 0
Swedish	0 0	0 0	0 0	0 0
SALTPETRE, per cwt. . . .				
English, 6 per cent. or under	23 6	24 0	26 0	26 6
over 6 per cent.	22 0	23 3	25 6	26 0
Madras	20 6	22 0	24 0	26 0
Bombay	17 0	20 0	20 0	25 0
British-refined	27 0	27 6	28 0	30 0
Nitrate of soda	12 6	14 0	14 0	15 0
SEED, Canary	40 0	48 0	36 0	46 0
Caraway, English	32 0	34 0	0 0	0 0
German, &c	32 0	34 0	0 0	0 0
Coriander	20 0	22 0	0 0	0 0
East India	0 0	0 0	0 0	0 0
Hemp	44 0	46 0	44 0	0 0
Linseed, Black Sea	67 0	0 0	55 6	0 0
Calcutta	65 0	66 0	54 0	55 0
Bombay	67 0	0 0	56 0	56 6
Egyptian	60 0	64 0	54 0	0 0
Mustard, brown	0 0	0 0	5 0	9 0
white	0 0	0 0	10 0	11 0
Poppy, East India	50 0	0 0	49 0	50 0
Rape, English	0 0	0 0	0 0	0 0
Danube	0 0	0 0	0 0	0 0
Calcutta fine	55 0	56 6	53 0	56 0
Bombay	66 0	67 0	67 0	68 0
Toel, Sany or Gngy	65 0	68 0	58 0	60 0
Cotton	150 0	160 0	140 0	0 0
Ground Nut Kernels	350 0	370 0	280 6	0 0
SOAP, London yel.	23 0	32 0	23 0	32 0
mottled	32 0	36 0	32 0	36 0
curd	46 0	50 0	46 0	50 0
Castile	40 0	42 0	40 0	42 0
Marseilles	40 0	42 0	40 0	42 0
Soy, China	3 0	3 3	3 6	3 9
Japan	0 0	0 0	1 5	0 0
Spongo, Turkey, fine picked	14 0	18 0	19 0	23 0
fair to good	6 0	12 0	7 0	17 0
ordinary	1 6	4 0	2 6	6 0
Bahama	0 8	2 6	0 4	1 3
TURPENTINE, Rough, per ct.	10 0	0 0	0 0	0 0
Spirits, French	44 0	45 0	55 0	0 0
American, in casks	46 6	47 0	65 0	0 0
WAX, Bees, English	180 0	185 0	170 0	175 6
Gormau	195 0	200 0	162 6	185 0
American	185 0	190 0	175 0	0 0
white fine	0 0	0 0	8 0	0 0
Jamaica	170 0	180 6	100 0	195 0
Gambia	175 0	190 0	180 0	190 0
Mogador	140 0	165 0	125 0	160 0
East India	160 0	190 0	150 0	180 0
ditto, bleached	190 0	210 0	200 0	230 0
vegetable, Japan	66 0	88 6	65 0	73 0
WOOD, Dye, per ton				
Fustic, Cuba	150 0	170 0	170 0	180 0
Jamaica	100 0	105 0	105 0	110 0
Savanna	120 0	130 0	120 0	0 0
Zanto	0 0	0 0	0 0	0 0
Logwood, Campeachy	165 0	180 0	180 0	210 0
Honduras	100 0	105 0	100 0	0 0
St. Domingo	00 0	95 0	80 0	0 0
Jamaica	05 0	0 0	70 0	80 0

